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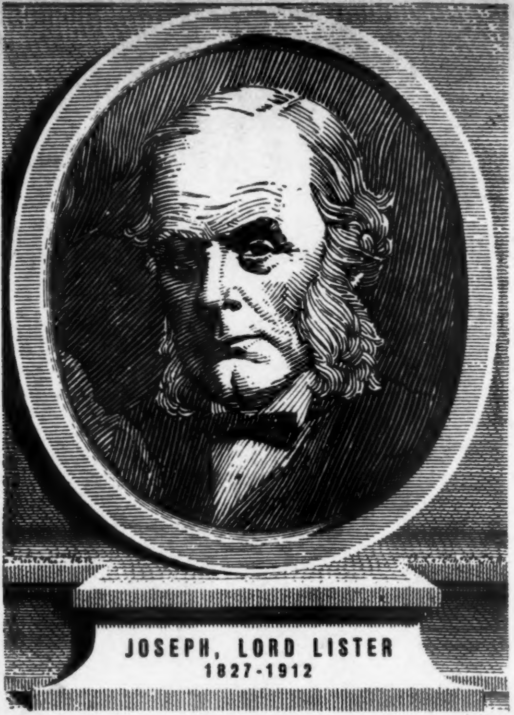
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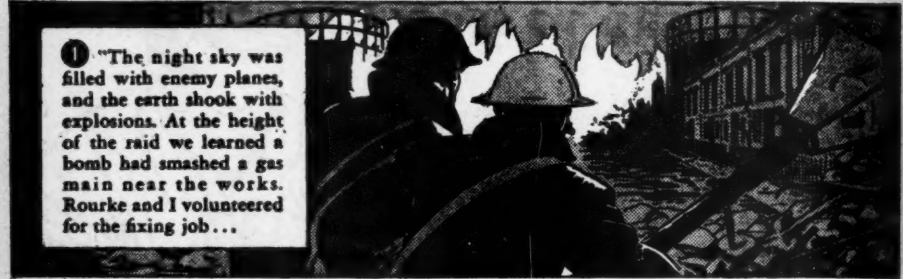
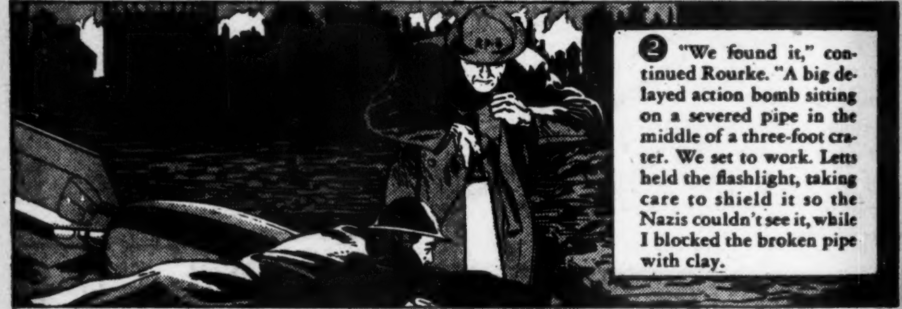
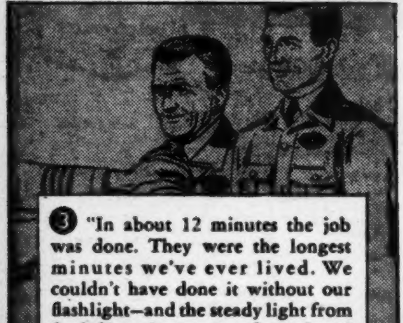


① "The night sky was filled with enemy planes, and the earth shook with explosions. At the height of the raid we learned a bomb had smashed a gas main near the works. Rourke and I volunteered for the fixing job . . .



② "We found it," continued Rourke. "A big delayed action bomb sitting on a severed pipe in the middle of a three-foot crater. We set to work. Letts held the flashlight, taking care to shield it so the Nazis couldn't see it, while I blocked the broken pipe with clay.



③ "In about 12 minutes the job was done. They were the longest minutes we've ever lived. We couldn't have done it without our flashlight—and the steady light from fresh batteries you can depend on."

NOTE: *Bomb Squad later dealt with time bomb. The George Medal for "extreme courage and devotion to duty" was awarded to Rourke and Letts.*

OCD approved flashlight regulations stipulate careful shielding of the light from a flashlight during a blackout, as Arthur Letts did. Likewise wartime economy demands strict conservation of both flashlights and batteries.

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Contents for July, 1943, Vol. XXXI, No. 5

John W. Campbell, Jr., Editor, Catherine Tarrant, Assistant Editor

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Novelettes

HUNCH . . . . **Clifford D. Simak** . . 9
Those who left Sanctuary seemed cured—but none would ever discuss what happened there. It took a blind man, and a man with a hunch, to see through the secrecy that veiled the place—

THE GREAT ENGINE . . . . **A. E. van Vogt** . . . 44
There are times—and ways—in which scientists can best serve progress by keeping that progress unknown to the world, even though the progress involves a thing as spectacular as the Great Engine.

Short Stories

UNTHINKING CAP . . . . **John Pierce** 39
The people of the future repaid their visitor from the past with a highly valuable device—which, because it worked, was a fraud!

THE RENEGADE . . . . **Marion Henry** . . . 87
Either way he chose—the world of men or the world of those super-gorillas—he was a renegade. He was human by birth; his other loyalty was of his own choice to begin with—

GLEEPS . . . . **P. Schuyler Miller** . . 99
Gleeps was very curious—he liked to understand things. He was a nice, harmless sort of creature, except that he got in the way in the most embarrassing manner. He kept changing into people—

Article

THE WORLD OF 61 CYGNI C . . . **R. S. Richardson** . . 67
A science article on the discovery of the first extra-solar planet known to man. This discovery is a datum as important in understanding of the Universe as the discovery of radium and atomic energy was. The Solar System can not have been a freak one-in-a-billion accident.

Serial

GATHER, DARKNESS! (Conclusion) . **Fritz Leiber, Jr.** . . . 118
Ending a tale of tyranny that masked itself behind the guise of a religion —and a political revolution that called itself Witchcraft!

Readers' Departments

THE EDITOR'S PAGE 6

IN TIMES TO COME 38
Department of Prophecy and Future Issues.

THE ANALYTICAL LABORATORY 38
An Analysis of Readers' Opinions.

BRASS TACKS 113
Concerning Purely Personal Preferences.

COVER BY TIMMINS

Illustrations by Fax, Kramer, Orban and Williams

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So It's Impossible—

Since air at atmospheric pressure is a very excellent conductor of electricity, if you just get an arc started, the air itself limits the possible voltage you can develop in a given size of generator. One inch of air gap breaks down under twenty-five thousand volts; one million volts will jump across a forty-inch gap; anything less than a six-foot gap to insulate a million-volt potential would be plain suicide. Therefore, it is impossible to build a million-volt generator less than six feet in its smallest dimension; a two-million-volt generator less than twelve feet long would be equally unreliable dynamite, and no engineer would comfortably contemplate any air-insulated mechanism that small.

The argument is obviously sound—one I fully subscribed to.

Donald W. Kerst of the University of Illinois has, with a bit of pure intellectual brilliance, knocked that whole line of argument into a *non sequitor.* He has an original laboratory hand-made model of a gadget, built purely to demonstrate the principle, not for real usefulness, that has a *maximum* dimension under *three* feet, and a minimum dimension less than one foot, which develops two million three hundred thousand volts. It's a size any home experimenter could cook up, and for that matter its inherent simplicity is such that too darned many home experimenters are apt to try cooking it up. The fact that it isn't big and impressive makes it rather easy to overlook the fact that only about a score of institutions in the world have equipment capable of producing the terrible radiation that little scrap-iron-and-bell-wire contraption turns out.

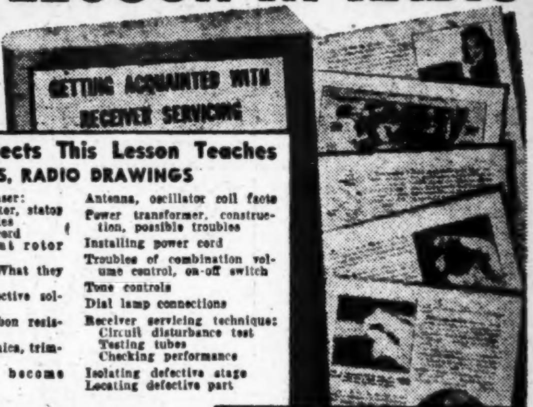
The General Electric Co. has helped Dr. Kerst with a "pilot plant" size model—an intermediate stage between the demonstration model—which is only twice as potent as those "giant million-volt X-ray machine" types—and the full-scale laboratory research tool planned. The intermediate model is sizable—weighs three and a half tons—but is still so small it was arranged on a sturdy bench to bring it to a comfortable working height. It develops twenty million volts, twice as great as any previous equipment was ever designed to go—and considerably more than twice as much as any previous equipment has been able to go consistently.

What twenty million volts means is definitely hard to realize. It does not develop it in the form of two binding posts, one labeled "Plus twenty million" and the other "Minus," for one thing; if it did, that pair of posts would have to be one hundred twenty inches apart as a minimum. The betatron generator produces a stream of electrons moving with a velocity equivalent to a fall through a twenty-million-volt field. Each individual electron is carrying very much more energy than an atom of radium releases when it explodes.

The full-scale betatron now being made is designed to produce one hundred million volt electrons. This energy level exists in nature in cosmic ray bursts. The unequaled violence of the disruption of the U-235 nucleus passes the two-hundred-million-volt mark; no other atomic explosion known approaches the one-hundred-million-volt level. The mechanism of the betatron is such that currents measured in amperes, not billionths of an ampere, could be produced at that voltage level—admittedly only in brief but appalling bursts of power—with results not presently predictable.

The Editor.

FREE LESSON IN RADIO



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  - Replacing damaged cone
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  - Remedies for open field coil
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- Gang tuning condenser:
  - Construction of rotor, stator
  - How capacity varies
  - Restringing dial cord
  - Straightening bent rotor plates
- I.F. transformers—What they do, repair hints
- How to locate defective soldered joints
- Inside story of carbon resistors
- Paper, electrolytic, mica, trimmer condensers
- How condensers become shorted, leaky
- Antenna, oscillator coil facts
- Power transformer, construction, possible troubles
- Installing power cord
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- Dial lamp connections
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Hunch

by Clifford D. Simak

The invading beings were very old—and marvelously subtle, for man had no sense to perceive them. Save—hunches. Hunches, and a blind man who saw through alien eyes.

Illustrated by Williams

Hannibal was daydreaming again and Spencer Chambers wished he'd stop. Chambers, as chairman of the Solar Control Board, had plenty of things to worry about without having his mind cluttered up with the mental pictures Hannibal kept running through his brain. But, Chambers knew, there was nothing he could do about it. Daydreaming was one of Hannibal's habits, and since Chambers needed the spidery little entity, he must put up with it as best he could.

If those mental pictures hadn't been so clear, it wouldn't have been so bad, but since Hannibal was the kind of thing he was they couldn't be anything but clear.

Chambers recognized the place Hannibal was remembering. It wasn't the first time Hannibal had remembered it and this time, as always, it held a haunting tinge of nostalgia. A vast green valley, dotted with red boulders splotched with gray lichens, and on either side of the valley towering mountain peaks that reached spear-point fingers toward a bright-blue sky.

Chambers, seeing the valley exactly as Hannibal saw it, had the uncomfortable feeling that he knew it, too—that in the next instant he could say its name, could give its exact location. He had felt that way before, when the identification of the place, just as now, seemed at his fingertips. Perhaps it was just an emotional hallucination brought about by Hannibal's frequent thinking of the place, by the roseate longing with which he invested it. Of that, however, Chambers could not be sure. At times he would have sworn the feeling was from his own brain, a feeling of his own, set apart and distinct from Hannibal's daydreams.

At one time that green valley might have been Hannibal's home, although it seemed unlikely. Hannibal had been found in the Asteroid Belt, to this day remained the only one of his species to be discovered. And that valley never could have been in the Asteroids, for the Belt had no green valleys, no blue skies.

Chambers would have liked to question Hannibal, but there was no way to question him—no way to put abstract thoughts into words or into symbols Hannibal might understand. Visual communication the picturing of actualities, yes—but not an abstract thought. Probably the very idea of direct communication of ideas, in the human sense, was foreign to Hannibal. After months of association with the outlandish little fellow, Chambers was beginning to believe so.

The room was dark except for the pool of light cast upon the desk top by the single lamp. Through the tall windows shone the stars and a silvery sheen that was the rising moon gilding the tops of the pines on the nearby ridge.

But darkness and night meant nothing to either Chambers or Hannibal. For Hannibal could see in the dark, Chambers could not see at all. Spencer Chambers was blind.

And yet, he saw, through the eyes—or, rather, the senses of Hannibal. Saw far plainer and more clearly than if he had seen with his own eyes. For Hannibal saw differently than a man sees—much differently, and better.

That is, except when he was daydreaming.

The daydream faded suddenly and Chambers, brain attuned to Hannibal's sensory vibrations, looked through and beyond the walls of his office into the reception room. A man had entered, was hanging up his coat, chatting with Chambers' secretary.

Chambers' lips compressed into straight, tight lines as he watched. Wrinkles creased his forehead and his analytical brain coldly classified and indexed once again the situation which he faced.

Moses Allen, he knew, was a good man, but in this particular problem he had made little progress—perhaps would make little progress, for it was something to which there seemed, at the moment, no answer.

As Chambers watched Allen stride across the reception room his lips relaxed a bit and he grinned to himself, wondering what Allen would think if he knew he was being spied upon. Moses Allen, head of the Solar Secret Service, being spied upon!

No one, not even Allen, knew the full extent of Hannibal's powers of sight. There was no reason, Chambers realized, to have kept it secret. It was just one of his eccentricities, he admitted. A little thing from which he gained a small, smug satisfaction—a bit of knowledge that he, a blind man, hugged close to himself.

Inside the office, Allen sat down in a chair in front of Chambers' desk, lit a cigarette.

"What is it this time, chief?" he asked.

Chambers seemed to stare at Allen, his dark glasses like bowls of blackness against his thin pale face. His voice was crisp, his words clipped short.

"The situation is getting worse, Moses. I'm discontinuing the station on Jupiter."

Allen whistled. "You'd counted a lot on that station."

"I had," Chambers acknowledged. "Under the alien conditions such as exist on that planet I had hoped we might develop a new chemistry, discover a new pharmacopoeia. A drug, perhaps, that would turn the trick. Some new chemical fact or combination. It was just a shot in the dark."

"We've taken a lot of them," said Allen. "We're just about down to a point where we have to play our hunches. We haven't much else left to play."

Chambers went on, almost as if Allen hadn't spoken. "The relief ship to Jupiter came back today. Brought back one man, mind entirely gone. The rest were dead. One of them had cut his throat. The relief men came back, too. Refused to stay after what they saw."

Allen grimaced. "Can't say I blame them."

"Those men were perfectly sane when they went out," declared Chambers. "Psychologists gave every one of them high ratings for mental stability. They were selected on that very point, because we realized Jupiter is bad—probably the most alien place in the entire Solar System. But not so bad every one of them would go mad in three short months."

Chambers matched his fingers. "The psychologists agree with me on that point."

Hannibal stirred a little, sharp claws scratching the desk top. Allen reached out a hand and chucked the little creature under the chin. Hannibal swiped angrily at the hand with an armored claw.

"I'm getting desperate, Moses," Chambers said.

"I know," said Allen. "Things getting worse all the time. Bad news from every corner of the Solar System. Communications breaking down. Machines standing idle. Vital installations no good because the men crack up when they try to run them."

They sat in silence, Allen scowling at his cigarette, Chambers stiff and straight behind his desk, almost as if he were sitting on the edge of his chair, waiting for something to happen.

"Situational psychoneurosis," said Allen. "That's what the experts call it. Another sixty-four-dollar word for plain insanity. Men walking out on their jobs. Men going berserk. The whole Solar System crumbling because they can't do the jobs they're meant to do."

Chambers spoke sharply. "We can't get anywhere by ranting at it, Moses. We have to find the answer or give up. Give up the dream men held before us. The dream of an integrated Solar System, integrated by men and for men, working smoothly, making the life of the human race a better life."

"You mean," said Allen, slowly, "what have I done about it?"

Chambers nodded. "I had that in mind, yes."

"I have been working on a lot of angles," Allen declared. "Canceling out most of them. Really just one big one left. But you won't find the answer in sabotage. Not that I won't work to find it there. Because, you see, that's my business. But I feel in my bones that this really is on the up and up—would know it was, except for one thing. To solve this problem, we have to find a new factor in the human mind, in human psychology—a new approach to the whole problem itself.

"Geniuses is our trouble. It takes geniuses to run a Solar System. Just ordinary intelligence isn't enough to do the job. And geniuses are screwy. You can't depend on them."

"And yet," said Spencer Chambers, almost angrily, "we must depend on them."

And that, Allen knew, was the truth—the bitter truth.

For years now there had been a breakdown of human efficiency. It had started gradually, a few incidents here, a few there. But it had spread, had progressed almost geometrically; had reached a point now where, unless something could be done about it, the Solar System's economic and industrial fabric would go to pot for lack of men to run it and the power plants and laboratories, the mills, the domed cities, the communication system men had built on all the planets encircling the Sun would crumble into dust.

Men were better trained, better equipped mentally, more brilliant than ever before. Of that there was no question. They had to be. Hundreds of jobs demanded geniuses. And there were geniuses, thousands of them, more than ever before. Trouble was they didn't stay geniuses. They went insane.

There had been evidence of a mass insanity trend as far back as the twentieth century, stemming even then from the greater demands which an increasingly complex, rapidly changing, vastly speeded-up civilization placed upon the human brain, upon human capabilities and skills. With the development of a scientific age, man suddenly had been called upon to become a mental giant. Man had tried, had in part succeeded. But the pace had been too fast—the work of man had outstripped his brain. Now man was losing out.

Today the world was a world of specialization. To be of economic value, men had to specialize. They had to study harder than ever to fit themselves into their world. College courses were tougher and longer. The very task of educating themselves for a place in their civilization placed upon them a nervous tension that was only intensified when they took over the strenuous, brain-wearing workaday tasks to which they were assigned.

No wonder, Allen told himself, that there came a time when they threw up their hands, walked out, didn't give a damn.

"You've got to find out what's wrong with the bright boys," he said. "You have to find what's in their make-up that makes them unstable. Maybe there's something wrong with their education, with the way it's dished out to them. Maybe—"

"The educators and psychologists are conducting research along those lines," Chambers reminded him, shortly.

"I get it," said Allen. "I'm to stick to my own field. All right, then. I'm going to tell you something that will make you madder than hell."

Chambers sat silent, waiting. Hannibal shifted himself along the desk, edging closer to Allen, almost as if he were listening and didn't want to miss a word.

"It's this Sanctuary business," Allen said. "You've seen the ads—"

He stopped in flustered embarrassment, but Chambers nodded.

"I see them, yes. I read the papers, Moses. I spread them out and Hannibal looks at them and I read them, just as well as you do. You needn't be so sensitive about my blindness."

"Sanctuary has those ads plastered all over the place," said Allen. "In papers, on signboards, everywhere. Sometimes they call themselves a rest home, sometimes a sanitarium. Sometimes they don't even bother to call themselves anything. Just use a lot of white space, with the name 'Sanctuary' in big type. Refined, all of it. Nothing crude. Nothing quackish about it. They've run about all the other mental sanitariums out of business. Nobody thinks of going anywhere but Sanctuary when they go batty now."

"What are you getting at?" snapped Chambers.

"I told you it would make you sore," Allen reminded him. "They've fooled you, just like they've fooled all the rest of us. Let me tell you what I know about them."

Chambers' lips were thin and straight. "Whatever made you investigate them, Moses? Sanctuary is—" He faltered. "Why, Sanctuary is—"

Allen laughed. "Yes, I know what you mean. Sanctuary is lily-white. Sanctuary is noble. It's a shining haven in a world that's going haywire. Yeah, that's what you think and everyone thinks. I thought so myself. I started looking them up on a hunch. I hated myself. I felt like I ought to go and hide. But I had a hunch, see, and I never pass one up. So I gritted my teeth and went ahead. And I'm convinced that Sanctuary is either the greatest racket the Solar System has ever known or it's tied up with this insanity some way. My best guess is that it's a racket. I can't figure any angles the other way except that maybe they're doing something to drive people nuts just to boost their business and that doesn't add up for a lot of reasons. If it's a racket, I'm wasting my time. There's bigger game to hunt than rackets these days."

He took a deep breath. "First I checked up on Dr. Jan Nichols, he's the fellow that runs it. And he's a nobody, far as I can find out. Certainly not a psychiatrist. Was in the Solar Service at one time. Headed a party making a survey of mineral resources out in the Belt. Had a minor degree in mineralogy. Just that, nothing more, no specialization. An opportunist, I would deduce. Took just enough education to get a job.

"Our records show the whole party dropped out of sight. Listed as lost. All the rest of them still are lost so far as anybody knows.

"I tried to get in touch with Nichols and couldn't do it. There's no way to reach him. No mail service. No radio service. Nothing. Sanctuary is isolated. If you want anything there, you go there personally, yourself."

"I hadn't realized that," said Chambers.

"Neither does anyone else," declared Allen. "No one tries to get in touch with Sanctuary unless they need their services and if they need their services they go there. But you haven't heard the half of it."

Allen lit a cigarette. A clock chimed softly in the room, and Hannibal, leaning out from the desk, took a swipe at Allen, missed him by bare inches.

The Secret Service man leaned back in his chair. "So, since I couldn't get in touch with Nichols, I sent some of my men out to Sanctuary. Six of them, in fact, at different times—"

He looked at Chambers, face grim.

"They didn't come back."

Chambers started slightly. "They didn't come back. You mean—"

"I mean just that. They didn't come back. I sent them out. Then nothing happened. No word from them. No word of them. They simply disappeared. That was three months ago."

"It seems incredible," declared Chambers. "Never for a moment have we worried about curing or caring for the men who went insane. Sanctuary did that, we thought. Better than anyone else could."

He shot a sudden question. "They do cure them, don't they?"

"Certainly," said Allen. "Certainly, they cure them. I've talked with many they have cured. But those they cure never go back into Solar Service. They are—"

He wrinkled his brow. "It's hard to put into words, chief. They seem to be different people. Their behavior patterns don't check against their former records. They have forgotten most of their former skills and knowledge. They aren't interested in things they were interested in before. They have a funny look in their eyes. They—"

Chambers waved a hand. "You have to realize they would be changed. The treatment might—"

"Yes, I know," interrupted Allen. "Your reaction is just the same as mine was—as everyone else's would be. It's instinctive to protect Sanctuary, to offer apology for it. Because, you see, every last one of us, some day may need to go there. And knowing that it's there, we feel reassured. Maybe we go batty. So what? Sanctuary will fix us up O. K. Won't cost us a cent if we haven't got the money. Even free transportation if we haven't got the fare. It's something to anchor to in this mad world. A sort of faith, even. It's tough to have it knocked from under you."

Chambers shook his head. "I'm almost sorry you started this business, Moses."

Allen rose, smashed out his cigarette in a tray.

"I was afraid you'd be. I hate to drop it now I've gone this far. It may fizzle out, but—"

"No," said Chambers, "don't drop it. We can't afford to drop anything these days. You, yourself, feel almost instinctively, that it will come to nothing, but on the outside chance it may not, you must go ahead."

"There's just one thing more, chief," said Allen. "I've mentioned it before. The people—"

Chambers flipped impatient hands. "I know what you're going to say, Moses. They resent me. They think I've drawn away from them. There have been too many rumors."

"They don't know you're blind," said

Allen. "They'd understand if they did know that. Better for them to know the truth than to think all the things they're thinking. I know what they're thinking. It's my business to know."

"Who would follow a blind man?" asked Chambers bitterly. "I'd gain their pity, lose their respect."

"They're baffled," said Allen. "They talk about your illness, say it has changed you, never realizing it left you blind. They even say your brain is going soft. They wonder about Hannibal, ask why you never are without him. Fantastic tales have grown up about him. Even more fantastic than the truth."

"Moses," said Chambers, sharply, "we will talk no more about this."

He sat stiff and straight in his chair, staring straight ahead, as Allen left.

Mrs. Templefinger's parties always were dull. That was a special privilege she held as society leader of New York's upper crust.

This party was no exception. The amateurish, three-dimensional movies of her trip to the Jovian moons had been bad enough, but the violinist was worse.

Cabot Bond, publisher of the *Morning Spaceways,* fidgeted in his chair, then suddenly relaxed and tried to look at ease as he caught Mrs. Templefinger glaring at him. She might be a snooty old dame, he told himself, and a trial to all her friends with her determined efforts to uphold the dignity of one of the Solar System's greatest family, but it definitely was not policy to vex her. She controlled too many advertising accounts.

Cabot Bond knew about advertising accounts. He lived by them and for them. And he worried about them. He was worrying about one of them now.

The violin wailed to a stop and the guests applauded politely. The violinist bowed condescendingly. Mrs. Templefinger beamed, fingering her famous rope of Asteroid jewels so the gems caught light and gleamed with slow ripples of alien fire.

The man next to Bond leaned close. "Great story that—about discovering the Rosetta stone of Mars," he said. "Liked the way your paper handled it. Lots of background. Interpretative writing. None of the sensationalism some of the other papers used. And you put it on the front page, too. The *Rocket* stuck it away on an inside page."

Bond wriggled uncomfortably. That particular story he'd just as soon forget. At least he didn't want to talk about it. But the man apparently expected an answer.

"It wasn't a stone," Bond said icily, almost wishing the violin would start up again. "It was a scroll."

"Greatest story of the century," said the man, entirely unabashed. "Why, it will open up all the ancient knowledge of Mars."

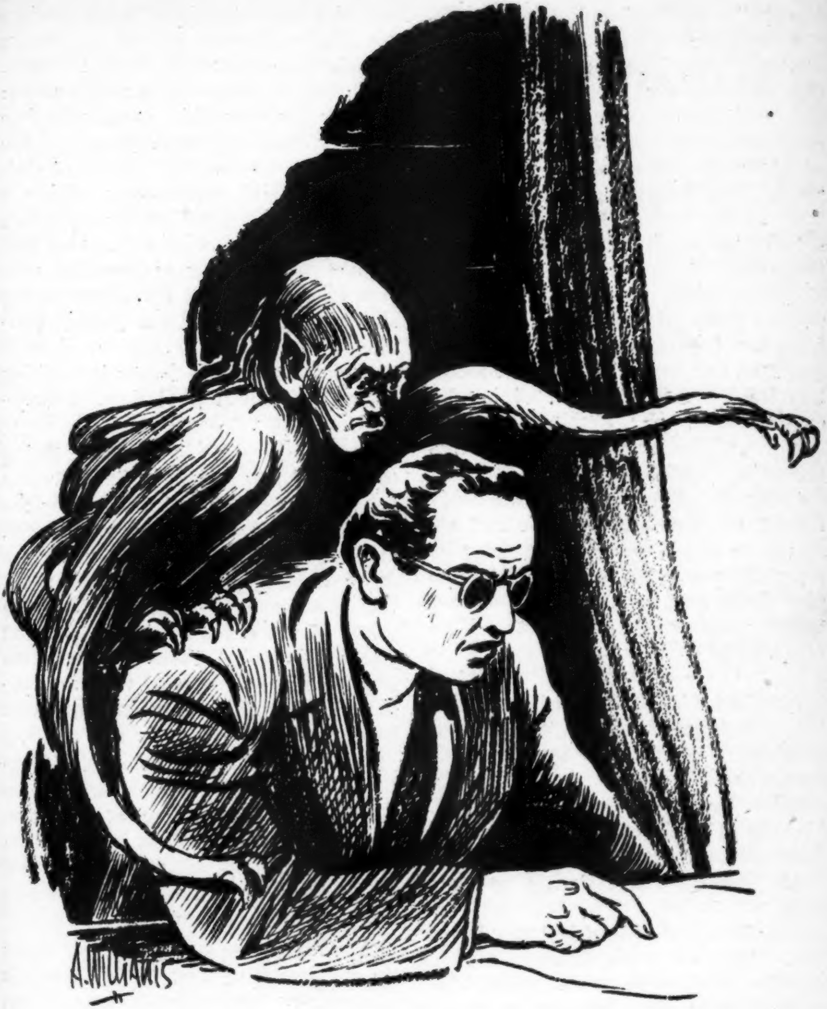
The violin shrieked violently as the musician sawed a vicious bow across the strings.

Bond settled back into his chair, returned to his worry once again.

Funny how Sanctuary, Inc., had reacted to that story about the Rosetta scroll of Mars. Almost as if they had been afraid to let it come before the public eye. Almost, although this seemed ridiculous, as if they might have been afraid of something that might be found in some old Martian record.

Perhaps he had been wrong in refusing their request to play the story down. Some of the other papers, like the *Rocket,* apparently had agreed. Others hadn't, of course, but most of those were sheets which never had carried heavy Sanctuary lineage, didn't stand to lose much. *Spaceways* did carry a lot of lineage. And it worried Bond.

The violin was racing now, a flurry of high-pitched notes, weaving a barbaric, outlandish pattern—a song of outer space, of cold winds on strange planets, of alien lands beneath unknown stars.



Mrs. Templefinger's sudden scream rang through the room, cutting across the shrilling of the music.

"My jewels!" she screamed. "My jewels!"

She had surged to her feet, one hand clutching the slender chain that encircled her throat. The chain on which the Asteroid jewels had been strung.

But now the famous jewels were gone, as if some hand of magic had stripped them from the chain and whisked them into nowhere.

The violinist stood motionless, bow poised, fingers hovering over the strings. A glass tinkled as it slipped from someone's fingers and struck the floor.

"They're gone!" shrieked Mrs. Templefinger. "My jewels are gone!"

The butler padded forward silently. "Perhaps I should call the police, madam," he offered respectfully.

A strange light came over Mrs. Templefinger's face, a soft and human light that smoothed out the lines around her eyes and suddenly made her soft and gracious instead of a glowering old dowager. For the first time in twenty years, Mrs. Templefinger smiled a gracious smile.

"No, Jacques," she whispered. "Not the police."

Still smiling, she sat down again, nodded to the violinist. The chain fell from her fingers, almost as if she had forgotten the jewels, almost as if a cool half million dollars' worth of jewelry didn't matter.

The violinist swept the bow across the strings again.

Cabot Bond rose and tiptoed softly from the room. Suddenly it had occurred to him there was something he must do—phone his editor, tell him to play down any more stories the wires might carry on the Rosetta scroll of Mars.

Harrison Kemp, head of the Solar Research Bureau on Pluto, straightened from the microscope, expelling his breath slowly.

His voice was husky with excitement. "Johnny, I really believe you've got it! After all these years . . . after—"

He stopped and stared, a stricken stare.

For Johnny Gardner had not heard him. Was not even looking at him. The man sat hunched on his stool, faint starlight from the laboratory port falling across his face, a face that had suddenly relaxed, hung loose and slack, a tired, wan face with haggard eyes and drooping jowls.

Kemp tried to speak, but his lips were dry and his tongue thick and terror dried up his words before they came. From somewhere back of him came the slow *drip-drip* of precious water. Outside the black spires of Plutonian granite speared up into the inky, starry sky.

And before the port, the hunched figure of a man whose gaze went out into the alien wilderness, yet did not see the jumbled tangle that was Pluto's surface.

"Johnny!" Kemp whispered, and the whisper frightened him as it seemed to scamper like a frightened rat around the room.

Gardner did not answer, did not move. One hand lay loosely in his lap, the other dangled at his side. One foot slipped off the rung of the stool and, just failing to reach the floor, swung slowly to and fro like a ghastly pendulum.

Kemp took a step forward, reaching out a hand that stopped short of Gardner's shoulder.

There was no use, he knew, of trying to do anything. Johnny Gardner was gone. The hulking body still sat on the stool, but the mind, that keen, clear-cut, knifelike mind, was gone. Gone like a dusty mummy falling in upon itself. One moment a mind that could probe to the very depth of life itself—the next moment a mind that was no more than a darkening cavern filled with the hollow hooting of already half-forgotten knowledge.

Fumbling in the darkness, Kemp found another stool, perched wearily on it. Perched and stared at Gardner, while he felt the nameless horror of an alien planet and an alien happening slowly circle over him, like dark wings beating in the starlight.

A small cone of brilliance hung above the workbench, lighting up the electronic microscope. And under the microscope, Kemp knew, was something that came close to being the raw material, the constituent element of life. Something that he and Johnny Gardner and Victor Findlay had sought—for how many years? To Kemp, sitting there in the darkness, it seemed eternity.

An eternity of research, of compiling notes, of seeming triumph, always followed by the blackest of defeat.

"And," said Harrison Kemp, speaking to himself and the silent room and the madman at the port, "here we are again!"

It would be futile, Kemp knew, to try to pick up where Gardner had left off. For Gardner had worked swiftly, had been forced to work swiftly, in those last few minutes. Since there had been no time to jot it down, he had tucked away that final crucial data in his brain. Even under the near-zero conditions to which the protoplasmic molecules had been subjected, they still would be unstable. They would have changed now, would have been rendered useless for further observation—would either have become more complex life or no life at all, having lost that tiny spark that set them off from other molecules.

Kemp knew he and Findlay would have to start over again. Johnny's notes would help them to a certain point —up to that point where he had ceased to write them down, had stored them in his brain. From that point onward they would have to go alone, have to feel their way along the path Johnny Gardner had taken, try to duplicate what he had done. For whatever was in Johnny's brain was lost now—lost completely, gone like a whiff of rocket gas hurled into the maw of space.

A door creaked open and Kemp got to his feet, turning slowly to face the man silhouetted against the light from the room beyond.

"Why so quiet?" asked Findlay. "What are you fellows—"

His voice ran down and stopped. He stood rigidly, staring at the star-lighted face of Johnny Gardner.

"It just happened, Vic," said Kemp. "He called me to show me something in the 'scope and while I looked it happened to him. When I looked up again and spoke to him, he was sitting there, just like he is now. He was all right before, just a few seconds before."

"It hits them like that," said Findlay. He stepped into the room, walked close to Kemp. "We should know," he said. "We've seen it happen to enough of them, you and I. Sometimes I have a dream, with you and me the only sane men left in the entire System. Everybody cracking, leaving just the two of us."

"I should have taken your advice," Kemp declared bitterly. "I should have sent him back on the last ship. But he looked all right. He acted O. K. And we needed him. He hung out for a long time. I thought maybe he would last."

"Don't blame yourself, chief," said Findlay. "There was no way for you to know."

"But you knew Vic! You warned me. You said he'd crack. How did you know? Tell me, how did—"

"Take it easy," cautioned Findlay. "I didn't know. Nothing definite, at least. Just a feeling I had. A hunch, I guess you'd call it."

They stood together, shoulder to shoulder, as if by standing thus they might beat back the sense of doom, the air of utter human futility that seemed to well within themselves.

"It won't always be like this," said Kemp. "Some day we'll be able to keep men's minds from going haywire. We'll find a way to help the mind keep pace with man's ambitions, to fall in step with progress."

Findlay nodded toward Gardner. "He was on the right track. He took the first long step. Before we even try to study the mind as it should be studied, scientifically, we must know what life is. Before we've always started in the middle and stumbled back, trying to find the Lord knows what. We can't afford to do that any longer. We have to have a basis, a basic understanding of life to understand ourselves."

Kemp nodded. "You're right, Vic. He took the first long step. And now . . . now, he goes to Sanctuary."

They helped Johnny Gardner from the stool and across the room. He walked like a blind man, stumblingly, muscles uncertain. His eyes stared straight ahead, as if he were watching something no one else could see.

"Thank heaven," said Findlay, "he went this way. Not like Smith."

Kemp shuddered, remembering. Smith had been violent. He had mouthed obscenities, had screamed and shouted, wrecked the laboratory. They had tried to calm him, to reason with him. When he charged Findlay with a steel bar, Kemp had shot him.

Although even that hadn't been any worse than Lempke. Lempke had committed suicide by walking out of the dome into the almost nonexistent atmosphere of frigid Pluto without benefit of space gear.

Dr. Daniel Monk laid the pencil aside, read once again the laborious lines of translation:

> This is the story of . . . who visited the fifth planet from the central sun; not the first to go there, but the first to discover the life that lived thereon, a curious form of life that because of its . . . had not previously been recognized as life—

Outside the thin night wind of Mars had risen and was sweeping the city of Sandebar, whining and moaning among the cornices and columns of the museum. Drift sand pecked with tiny fingers against the windows and the brilliant Martian starlight painted frosty squares on the floor as it came tumbling through the casement.

This is the story of—

Dr. Monk frowned at that. The story of whom? Probably, he told himself, he would never know, for the vocabulary made available by the Rosetta scroll did not extend to personal names.

With a wry smile he picked up his pencil again, wrote "John Doe" in the blank. That was as good as any name.

This is the story of John Doe—

But that didn't answer another question. It didn't tell why the life of the fifth planet had not been recognized as life.

The fifth planet, without a doubt, was that planet which in another æon had traveled an orbit between Mars and Jupiter—the planet now represented by the Asteroid Belt, a maelstrom of planetary debris. It would have been the planet, it and the Earth, most accessible to Mars. It was natural the Martians should have gone there. And that they had known the planet before its disruption gave a breath-taking clue to the incredible antiquity of the scroll from which the passage had been translated.

Perhaps, Monk told himself, one of the other scrolls might tell of the actual breakup of the fifth planet, might give a clue or state a cause for its destruction. There were thousands of other scrolls, the loot of years from the ruins of Martian cities. But until this moment they had been voiceless, mute testimony the Martians had possessed a written language, but telling nothing of that language, revealing none of the vast store of information they held.

A curious form of life that because of its—

Because of its what? What form could life take, what trick could it devise to hide its being? Invisibility? Some variant of protective coloration? But one couldn't write "invisibility" into the text as one had written "John Doe."

Perhaps some day, Monk told himself, he might find the answer, might be able to write in that missing word. But not now. Not yet. The Rosetta scroll, for all its importance, still left much to be desired. It necessarily had to leave much to be desired, for it dealt in a language that sprang from a different source than Terrestrial language, developed along alien lines, represented thought processes that could have been —must have been—poles apart from the thoughts of Earth.

All that the Martian language held in common with Earthian language was that both represented thought symbols. That was all; there was very little similarity in the way they went about doing that same thing.

Monk reached out and lifted the heavy metal cylinder from the desk before him. Carefully, almost reverentially, he flipped open the lock that released one end of the cylinder, drew out the heavy, lengthy scroll that had provided the key to the thoughts, the works, the ways of the ancient race of Mars.

He unrolled it slowly, gently, squinting at the faded characters, faint with a million years or more of being buried in the sands of Mars.

A dictionary once—a dictionary again, but in a different way.

Monk wondered what sort of a long-dead personality had penned that dictionary. Scholar, seeking no more than the ways of truth? Businessman, seeking to facilitate a better lingual understanding, therefore a better commercial understanding, between the race of Mars and the now decadent races of the Jovian moons? Statesmen, trying to bring about a good-neighbor policy?

The Martian, however, whoever he might have been, had not understood that Jovian language too well, for some of the words and idioms didn't check with the Jovian language as Earthmen knew it. Or it might have been that the language itself had changed. Perhaps in that long-gone day when the scroll was written the moon men of Jupiter had not been decadent.

On that point, Monk knew, the Jovians themselves could throw little light. There were ruins, of course, and legends, but the legends were utterly crazy and the ruins held no traditional sentiment for the tribes of Europa or Ganymede. Unlike most peoples, they held no racial memories of a more glorious past, of a forgotten golden age.

It was a roundabout way, a long way, an awkward way to read the language of Mars, Monk reflected. Martian to Jovian to Earthian. But it was better than no way at all.

The clock on the manuscript cabinet chimed briefly, apologetically. Monk glanced at it and started in surprise. Midnight. He had not realized it was that late. Suddenly he knew that he was tired and hungry, needed a drink and smoke.

He rose and walked to a table, found a bottle and glass, poured himself a drink. From somewhere, far in another part of the vast building, came the ghostly sound of a watchman's tread, making his rounds. The sand talked and hissed against the window.

Back at his desk, Monk sipped at his drink, staring at the metallic tube, thinking of the faint scrawlings on the scroll inside.

A Rosetta stone—the Rosetta stone of Mars. Brought in off the desert by a man who might just as easily have passed it by. Uncovered by shifting sand that in the next hour might just as well have covered it again for all eternity.

Monk lifted his glass to the weathered cylinder.

"To destiny," he said, and drank before he realized how silly it sounded.

Or was it silly? Might there not really be such a thing as destiny? An actual force moving to offset the haphazard course of a vagrant universe? Sometimes it seemed so. Sometimes—

Monk emptied the glass, set it on the desk, dug into his pocket for cigarettes. His fingers closed on a small package and he drew it out wonderingly, brow wrinkled. Then, quickly, he remembered. It had been in his mail box that morning. He had meant to open it later, had forgotten it until now.

He examined it curiously. It bore no return address and his own was laboriously printed by hand. He ripped the fastening tapes with his fingernails, unwrapped the paper.

A jewel box! Monk snapped up the lid and stiffened in surprise.

In its bed of rich velvet lay the gleaming roundness of an Asteroid jewel. It glowed softly under the desk lamp, colors flowing and changing within its heart, almost as if the jewel itself might be in motion.

There was no card. Nothing to indicate who had sent the jewel or, more important, why it had been sent. Asteroid jewels, Monk knew, weren't something to be just sent around to anyone for no reason at all. The stone before him, he realized, had a value that ran close to five figures.

Almost fearfully, he lifted the gem between thumb and forefinger, held it to the light and caught his breath in wonder as it blazed with soul-stirring beauty.

With a feeling that approached awe, he replaced it, sat quietly in his chair watching it.

Queer things, the Asteroid jewels, queer in more ways than one.

No one knew just what they were. No Asteroid jewel ever had been analyzed. Spectrographically, they were like nothing science had ever known. They could be broken down chemically, of course, but even then they were impossible of analysis. Something there to analyze, naturally, but with certain baffling characteristics no chemist had yet been able to tie down and catalogue.

Found nowhere else in the Solar System, they were the magic that drove men to lives of bitter privation in the Belt, searching among the debris of a dead planet for that tiny gleam in the jumbled rocks that would spell riches. Most of them, as could be expected, died without ever finding a single jewel; died in one of a vast variety of horrible, lonely ways a man can die among the Asteroids.

Monk found a cigarette and lighted it, listening to the pelting of the sand against the window. But there was a strange sound, too. Something that was not sand tapping on the panes, nor yet the shrill keening of the savage wind that moaned against the building. A faint whining that bore a pattern of melody, the sobbing of music—music that sneaked in and out of the wind blasts until one wondered if it was really there or was just imagination.

Monk sat stiffly, poised, cigarette drooping, ears straining.

It came again, the cry of strings, the breath of lilting cadence, until it was a thing apart from the wind and the patter of the sand.

A violin! Someone playing a violin inside the museum!

Monk leaped to his feet and suddenly the violin screamed in singing agony.

And even as that melodic scream ran full voiced through the hall outside, a sharp bell of warning clanged inside Monk's brain.

Acting on impulse, his hand shot down and snatched up the Asteroid jewel. Clutching it savagely, he hurled it viciously against the metallic side of the manuscript cabinet.

It flashed for a moment in the light as it exploded into tiny bits of glowing dust. And even as it splashed to shards, it changed—or tried to change. For just a moment it was not a jewel, but something else, a fairylike thing—but a crippled fairy. A fairy with humped back and crooked spine and other curious deformities.

Then there was no twisted fairy, but only jewel dust twinkling on the floor and the sound of running feet far down the corridor.

Monk did not try to give chase to the man outside. Instead, he stood as if frozen, listening to the wind and the sand dance on the window, staring at the sparkle on the floor.

He slowly closed and opened his right hand, trying to remember just how the jewel had felt at the instant he had clutched it. Almost as if it might have been alive, were struggling to get out of his clutches, fighting to attain some end, to carry out some destiny.

His eyes still were upon the floor.

"Now," he said aloud, amazement in his words, "I wonder why I did that?"

Standing in front of Spencer Chambers' desk, Harrison Kemp was assailed by doubt, found that in this moment he could not reconcile himself to the belief he had done the right thing. If he were wrong, he had deserted a post he should have kept. Even if he were right, what good could his action do?

"I remember you very well," he heard Chambers say. "You have been out on Pluto. Life research. Some real achievements in that direction."

"We have failed too often," Kemp told him flatly.

Chambers matched his fingers on the desk in front of him. "We all fail too often," Chambers said. "And yet, some day, some one of us will succeed, and then it will be as if all of us succeeded. We can write off the wasted years."

Kemp stood stiff and straight. "Perhaps you wonder why I'm here."

Chambers smiled a little. "Perhaps I do. And yet, why should I. You have been gone from Earth for a long time. Perhaps you wanted to see the planet once again."

"It wasn't that," Kemp told him. "It's something else. I came because I am about to go insane."

Chambers gasped involuntarily.

"Say that again," he whispered. "Say it slowly. Very slowly."

"You heard me," said Kemp. "I came because I'm going to crack. I came here first. Then I'm going out to Sanctuary. But I thought you'd like to know—well, know, that a man can tell it in advance."

"Yes," said Chambers, "I want to know. But even more than that. I want to know how you can tell."

"I couldn't myself," Kemp told him. "It was Findlay who knew."

"Findlay?"

"A man who worked with me on Pluto. And he didn't really know. What I mean is he had no actual evidence. But he had a hunch."

"A hunch?" asked Spencer Chambers. "Just a hunch? That's all?"

"He's had them before," Kemp declared. "And they're usually right. He had one about Johnny Gardner before Johnny cracked up. Told me I should send him back. I didn't. Johnny cracked."

"Only about Johnny Gardner?"

"No, about other things as well. About ways to go about our research, ways that aren't orthodox. But they usually bring results. And about what will happen the next day or the day after that. Just little inconsequential things. Has a feeling, he says—a feeling for the future."

Chambers stirred uneasily. "You've been thinking about this?" he asked. "Trying to puzzle it out. Trying to explain it."

"Perhaps I have," admitted Kemp, "but not in the way you mean. I'm not crazy yet. May not be tomorrow or next week or even next month. But I've watched myself and I'm pretty sure Findlay was right. Small things that point the way. Things most men would just pass by, never give a second thought. Laugh and say they were growing old or getting clumsy."

"Like what?" asked Chambers.

"Like forgetting things I should know. Elemental facts, even. Having to think before I can tell you what seven times eight equals. Facts that should be second nature. Trying to recall certain laws and fumbling around with them. Having to concentrate too hard upon laboratory technique. Getting it all eventually, even quickly, but with a split-second lag."

Chambers nodded. "I see what you mean. Maybe the psychologists could help—"

"It wouldn't work," declared Kemp. "The lag isn't so great but a man could cover up. And if he knew someone was watching he would cover up. That would be instinctive. When it becomes noticeable to someone other than yourself it's gone too far. It's the brain running down, tiring out, beginning to get fuzzy. The first danger signals."

"That's right," said Chambers. "There is another answer, too. The psychologists, themselves, would go insane."

He lifted his head, appeared to stare at Kemp.

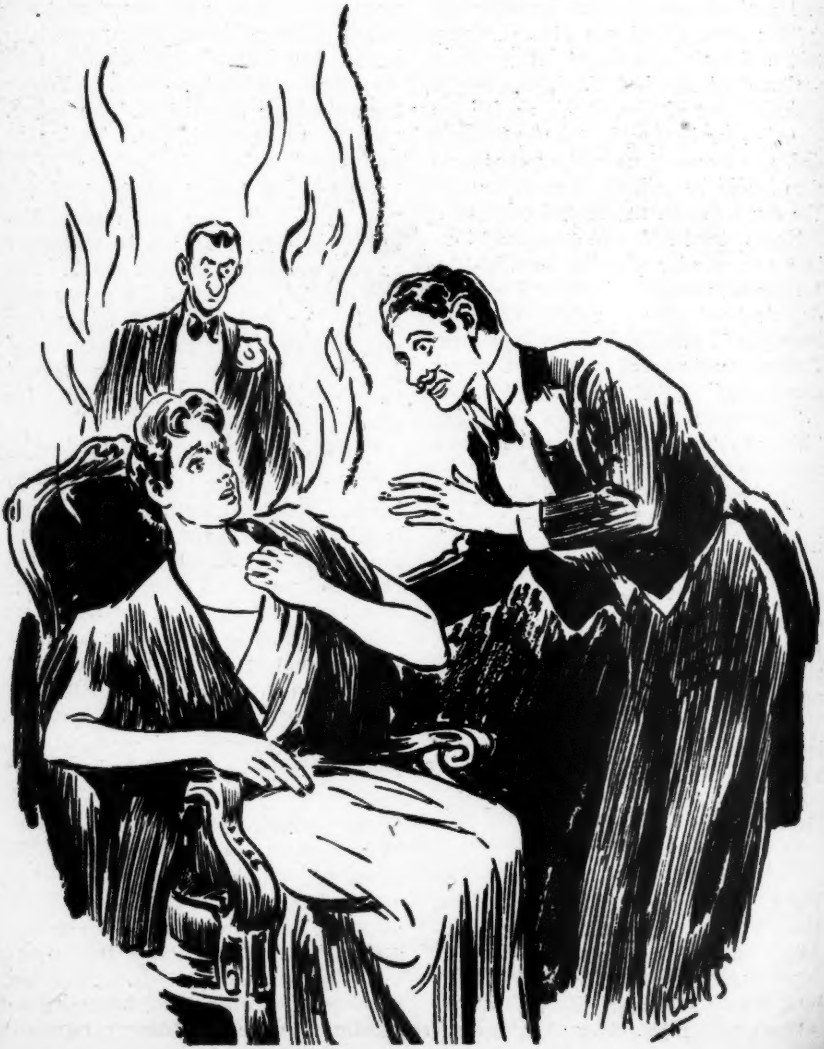
"Why don't you sit down?" he asked.

"Thank you," said Kemp. He sank into a chair. On the desk the spidery little statue moved with a scuttling shamble and Kemp jumped in momentary fright.

Chambers laughed quietly. "That's only Hannibal."

Kemp stared at Hannibal and Hannibal stared back, reached out a tentative claw.

"He likes you," said Chambers in surprise. "You should consider that



a compliment, Kemp. Usually he simply ignores people."

Kemp stared stonily at Hannibal, fascinated by him. "How do you know he likes me?"

"I have ways of knowing," Chambers said.

Kemp extended a cautious finger, and for a moment Hannibal's claw closed about it tightly, but gently. Then the grotesque little being drew away, squatted down, became a statue once again.

"What is he?" Kemp asked.

Chambers shook his head. "No one knows. No one can even guess. A strange form of life. You are interested in life, aren't you, Kemp?"

"Naturally," said Kemp. "I've lived with it for years, wondering what it is, trying to find out."

Chambers reached out and picked up Hannibal, put him on his shoulder. Then he lifted a sheaf of papers from his desk, shuffled through them, picked out half a dozen sheets.

"I have something here that should interest you," he said. "You've heard of Dr. Monk."

Kemp nodded. "The man who found the Rosetta scroll of Mars."

"Ever meet him?"

Kemp shook his head.

"Interesting chap," said Chambers. "Buried neck-deep in his beloved Martian manuscripts. Practically slavering in anticipation, but getting just a bit afraid."

He rustled the sheets. "I heard from him last week. Tells me he has found evidence that life, a rather queer form of life, once existed on the fifth planet before it disrupted to form the Asteroids. The Martians wrote that this life was able to encyst itself, live over long periods in suspended animation. Not the mechanically induced suspended animation the human race has tried from time to time, but a natural encystation, a variation of protective coloration."

"Interesting," said Kemp, "but a bit out of my line. It suggests many possibilities. Shows the almost endless flexibility of life as such."

Chambers nodded. "I thought maybe you would have that reaction. It was mine, too, but I'm not an expert on that sort of thing. Monk hints that life form still may exist. Hints at other things, too. He seemed to be upset when he wrote the letter. Almost as if he were on the verge of a discovery he himself couldn't quite believe. A little frightened at it, even. Not wanting to say too much, you see, until he was absolutely sure."

"Why should something like that upset him?" demanded Kemp. "It's information out of the past. Surely something he finds in those old scrolls can't reach out—"

Chambers lifted his hand. "You haven't heard it all. The Martians were afraid of that life on the fifth planet, Kemp. Deathly afraid of it! So afraid of it they blew up the planet, blasted it, destroyed it, thinking that in doing so they would wipe out the life it bore."

Chambers' face did not change. He did not stir.

"Monk believes they failed," he said.

The room swam in almost frightened silence. Hannibal stirred uneasily on his perch on Chambers' shoulder.

"Can you imagine"—Chambers' voice was almost a whisper. "Can you imagine a fear so great that a race would blow up, destroy another planet to rid themselves of it?"

Kemp shook his head. "It seems rather hard, and yet, given a fear great enough—"

He stopped and shot a sudden look at Chambers. "Why have you bothered to tell me this?" he asked.

"Why, don't you see?" said Chambers smoothly. "Here might be a new kind of life—a different kind of life, developed millions of years ago under another environment. It might have followed a divergent quirk of development, just some tiny, subtle difference that would provide a key."

"I see what you're driving at," said Kemp. "But not me. Findlay is your man. I haven't got the time. I'm living on borrowed sanity. And, to start with, you haven't even got that life. You hardly would know what to look for. An encysted form of life. That could be anything. Send a million men out into the Asteroids to hunt for it and it might take a thousand years.

"The idea is sound, of course. We've followed it in other instances, without success. The moon men of Jupiter were no help. Neither were the Venusians. The Martians, of course, were out of the picture to start with. We don't even know what they were like. Not even a skeleton of them has been found. Maybe the race they were afraid of got them after all—did away with them completely."

Chambers smiled bleakly. "I should have known it was no use."

"I'm sorry," said Kemp. "I have to go to Sanctuary. I've seen some others when it happened to them. Johnny Gardner and Smith and Lempke. It's not going to happen to me that way if I can help it."

Chambers matched his fingers carefully. "You've been in the service a long time, Kemp."

"Ten years," said Kemp.

"During those ten years you have worked with scarcely a thought of yourself," said Chambers quietly. "There is no need to be modest. I know your record. You have held a certain ideal. An ideal for a better Solar System, a better human life. You would have given your right arm to have done something that would actually have contributed to the betterment of mankind. Like finding out what life is, for example. You came here now because you thought what you had to tell might help."

Kemp sat without speaking.

"Isn't that it?" insisted Chambers.

"Perhaps it is," admitted Kemp. "I've never thought of it in just those words. To me it was a job."

"Would you do another job?" asked Chambers. "Another job for mankind? Without knowing why you did it? Without asking any questions?"

Kemp leaped to his feet. "I've told you I was going to Sanctuary," he shouted. "I have done what I can, all I can. You can't ask me to wait around for—"

"You will go to Sanctuary," said Chambers sharply.

"But this job—"

"When you go to Sanctuary I want you to take Hannibal along."

Kemp gasped. "Hannibal?"

"Exactly," said Chambers. "Without asking me why."

Kemp opened his mouth to speak, closed it.

"Now?" he finally asked.

"Now," said Chambers. He rose, lifted Hannibal from his shoulder, placed him on Kemp's shoulder. Kemp felt the sharp claws digging through his clothing, into his flesh, felt one tiny arm pawing at his neck, seeking a hold.

Chambers patted Hannibal on the head. Tears welled out of his sightless eyes behind the large dark glasses.

Sanctuary was a place of beauty, a beauty that gripped one by the throat and held him, as if against a wall.

Once, a few years ago, Kemp realized, it had been a barren hunk of rock, five miles across at most, tumbling through space on an eccentric orbit. No air, no water—nothing but stark stone that glinted dully when the feeble rays of the distant sun chanced to fall across its surface.

But now it was a garden with lacy waterfalls and singing streams arched by feathery trees in whose branches flitted warbling birds. Cleverly concealed lighting held the black of space at bay and invested the tiny planetoid with a perpetual just-before-dusk, a soft and radiant light that dimmed to purple shadows where the path of flagging ran up the jagged hill crowned by a classic building of shining white plastic.

A garden built by blasting disintegrators that shaped the face of the rock to an architect's blueprint, that gouged deep wells for the gravity apparatus, that chewed the residue of its labor into the basis for the soil in which the trees and other vegetation grew. A garden made livable by machines that manufactured air and water, that screened out the lashing radiations that move through naked space—and yet no less beautiful because it was man and machine-made.

Kemp hesitated beside a deep, still pool just below a stretch of white sprayed, singing water crossed by a rustic bridge and drank in the scene that ran up the crags before him. A scene that whispered with a silence made up of little sounds. And as he stood there a deep peace fell upon him, a peace he could almost feel, feel it seeping into his brain, wrapping his body—almost as if it were something he could reach and grasp.

It was almost as if he had always lived here, as if he knew and loved this place from long association. The many black years on Pluto were dimmed into a distant memory and it seemed as if a weight had fallen from his shoulders, from the shoulders of his soul.

A bird twittered sleepily and the water splashed on stones. A tiny breeze brought the swishing of the waterfall that feathered down the cliff and a breath of fragrance from some blooming thing. Far off a bell chimed softly, like a liquid note running on the scented air.

Something scurried in the bushes and scuttled up the path and, looking down, Kemp saw Hannibal and at the sight of the grinning face of the little creature his thoughts were jerked back into pattern again.

"Thank goodness you decided to show up," said Kemp. "Where you been? What's the idea of hiding out on me?"

Hannibal grimaced at him.

Well, thought Kemp, that was something less to worry about now. Hannibal was in Sanctuary and technically that carried out the request Chambers had made of him. He remembered the minute of wild panic when, landing at Sanctuary spaceport, he had been unable to find the creature. Search of the tiny one-man ship in which he had come to Sanctuary failed to locate the missing Hannibal, and Kemp had finally given up, convinced that somehow during the past few hours, Chambers' pet had escaped into space, although that had seemed impossible.

"So you hid out somewhere," Kemp said. "Scared they'd find you, maybe, and refuse to let you in. You needn't have worried, though, for they didn't pay any attention to me or to the ship. Just gave me a parking ticket and pointed out the path."

He stooped and reached for Hannibal, but the creature backed away into the bushes.

"What's the matter with you?" snapped Kemp. "You were chummy enough until just—"

His voice fell off, bewildered. He was talking to nothing. Hannibal was gone.

For a moment Kemp stood on the path, then turned slowly and started up the hill. And as he followed the winding trail that skirted the crags, he felt the peace of the place take hold of him again and it was as if he walked an old remembered way, as if he begrudged every footstep for the beauty that he left behind, but moved on to a newer beauty just ahead.

He met the old man halfway up the hill and stood aside because there was not room for both to keep the path. For some reason the man's brown robe reaching to his ankles and his bare feet padding in the little patches of dust that lay among the stones, even his flowing white beard did not seem strange, but something that fitted in the picture.

"Peace be on you," the old man said, and then stood before him quietly, looking at him out of calm blue eyes.

"I welcome you to Sanctuary," the old man said. "I have something for you."

He thrust his hand into a pocket of his robe and brought out a gleaming stone, held it toward Kemp.

Kemp stared at it.

"For you, my friend," the old man insisted.

Kemp stammered. "But it's . . . it's an Asteroid jewel."

"It is more than that, Harrison Kemp," declared the oldster. "It is much more than that."

"But even—"

The other spoke smoothly, unhurriedly. "You still react as you did on Earth—out in the old worlds, but here you are in a new world. Here values are different, standards of life are not the same. We do not hate, for one thing. Nor do we question kindness, rather we expect it—and give it. We are not suspicious of motives."

"But this is a sanitarium," Kemp blurted out. "I came here to be treated. Treated for insanity."

A smile flicked at the old man's lips. "You are wondering where you'll find the office and make arrangements for treatment."

"Exactly," said Kemp.

"The treatment," declared the oldster, "already has started. Somewhere along this path you found peace—a greater, deeper peace than you've ever known before. Don't fight that peace. Don't tell yourself it's wrong for you to feel it. Accept it and hold it close. The insanity of your worlds is a product of your lives, your way of life. We offer you a new way of life. That is our treatment."

Hesitantly, Kemp reached out and took the jewel. "And this is a part of that new way of life?"

The old man nodded. "Another part is a little chapel you will find along the way. Stop there for a moment. Step inside and look at the painting you will find there."

"Just look at a painting?"

"That's right. Just look at it."

"And it will help me?"

"It may."

The old man stepped down the path. "Peace go with you," he said and paced slowly down the hill.

Kemp stared at the jewel in his palm, saw the slow wash of color stir within its heart.

"Stage setting," he told himself, although he didn't say it quite aloud.

A pastoral scene of enchanting beauty, a man who wore a brown robe and a long white beard, the classic white lines of the building on the plateau, the chapel with a painting. Of course a man would find peace here. How could a man help but find peace here? It was designed and built for the purpose—this scene. Just as an architect would design and an engineer would build a spaceship. Only a spaceship was meant to travel across the void, and this place, this garden, was meant to bring peace to troubled men, men with souls so troubled that they were insane.

Kemp stared at a flowering crabapple tree that clung to the rocks above him, and even as he watched a slight breeze shook the tree and a shower of petals cascaded down toward him. Dimly, Kemp wondered if that tree kept on blooming over and over again. Perhaps it did. Perhaps it never bore an apple, perhaps it just kept on flowering. For its function here in Sanctuary was to flower, not to fruit. Blossoms had more psychological value as a stage setting than apples—therefore, perhaps, the tree kept on blossoming and blossoming.

Peace, of course. But how could they make it stick? How could the men who ran Sanctuary make peace stay with a man? Did the painting or the Asteroid jewel have something to do with it? And could peace alone provide the answer to the twisted brains that came here?

Doubt jabbed at him with tiny spears, doubt and skepticism—the old skepticism he had brought with him from the dusty old worlds, the frigid old worlds, the bitter old worlds that lay outside the pale of Sanctuary.

And yet doubt, even skepticism, quailed before the beauty of the place, faltered when he remembered the convincing sincerity of the old man in the brown robe, when he remembered those calm blue eyes and the majesty of the long white beard. It was hard to think, Kemp told himself, that all of this could be no more than mere psychological trappings.

He shook his head, bewildered, brushed clinging apple blossoms from his shoulder and resumed his climb, Asteroid jewel still clutched tightly in his hand. The path narrowed until it was scarcely wide enough to walk upon, with the sheer wall on his right knifing up toward the plateau, the precipice to his left dropping abruptly into a little valley where the brook gurgled and laughed beneath the waterfall that loomed just ahead.

At the second turn he came upon the chapel. A little place, it stood close to the path, recessed a little into the wall of rock. The door stood ajar, as if inviting him.

Hesitating for a moment, Kemp stepped into the recess, pushed gently on the door and stepped inside. Stepped inside and halted, frozen by the painting that confronted him. Set in a rocky alcove in the wall, it was lighted by a beam that speared down from the ceiling just above the door.

As if it were a scene one came upon through an open window rather than one caught upon a canvas, the city stood framed within the flare of light—a weird, fantastic city sprawled on some outer world. Bizarre architecture rearing against an outlandish background; towers leaping upward and fading into nothing, showing no clear-cut line where they left off; spidery sky bridges coiling and looping among the spires and domes that somehow were not the way spires and domes should be—the city looked like the impassioned chiselings of some mad sculptor.

And as Kemp stood transfixed before the city in the wall, a bell clanged far above him, one sharp clear note that lanced into his brain and shook him like an angry fist.

Something stirred within his hand, something that came to life and grew and wanted to be free. With a wild exclamation, Kemp jerked his hand in front of him, shaking it to free it of the thing that moved within it—repugnance choking him, an instinctive gesture born in the human race by spiders in dark caves, by crawling things that dropped off jungle leaves and bit.

But it was no spider, no crawling thing. Instead it was a light, a little point of light that slipped from between his fingers and rose and swiftly faded into nothing. And even as it faded, Kemp felt cool fingers on his jumping nerves, fingers that soothed them and quieted them until he felt peace flow toward him once again, but this time a deeper, calmer, vaster peace that took in all the universe, that left him breathless with the very thought of it.

Claws rustled on the floor behind him and a dark form sailed through the air to land upon his shoulder.

"Hannibal!" yelled the startled Kemp.

But, even as he yelled, Hannibal launched himself into the air again, straight from Kemp's shoulder into empty air, striking viciously at something that was there, something that fought back, but something Kemp could not see at all.

"Hannibal!" Kemp shrieked again, and the shriek was raw and vicious as he realized that his new-found peace had been stripped from him as one might strip a cloak, leaving him naked in the chill of sudden fear.

Hannibal was fighting something, of that there was no doubt. An invisible something that struggled to get free. But Hannibal had a death grip. His savage jaws were closed upon something that had substance, his terrible claws raked at it, tore at it.

Kemp backed away until he felt the stone wall at his back, then stood and stared with unbelieving eyes.

Hannibal was winning out, was dragging the thing in the air down to the ground. As if he were performing slow-motion acrobatics, he twisted and turned in the air, was slowly sinking toward the floor. And never for a moment were those scythelike claws idle. They raked and slashed and tore and the thing that fought them was weakening, dropped faster and faster.

Just before they reached the floor, Hannibal relaxed his grip for a moment, twisted in midair like a cat and pounced again. For a fleeting second Kemp saw the shape of the thing Hannibal held between his jaws, the thing he shook and shook, then cast contemptuously aside—a shimmery, fairylike thing with dragging wings and a mothlike body. Just a glimpse, that was all.

"Hannibal!" gasped Kemp. "Hannibal, what have you done?"

Hannibal stood on bowed legs and stared back at him with eyes in which Kemp saw the smoky shine of triumph. Like a cat might look when it has caught a bird, like a man might look when he kills a mortal enemy.

"It gave me peace," said Kemp. "Whatever it was, it gave me peace. And now—"

He took a slow step forward and Hannibal backed away.

But Kemp stopped as a swift thought struck him.

The Asteroid jewel!

Slowly he lifted his two hands and looked at them and found them empty. The jewel, he remembered, had been clutched in his right hand and it had been from that hand that the shining thing arose.

He caught his breath, still staring at his hands.

An Asteroid jewel one moment, and the next, when the bell chimed, a spot of glowing light—then nothing. And yet something, for Hannibal had killed something, a thing that had a mothlike body and still could not have been a moth, for a man can see a moth.

Kemp's anger at Hannibal faded and in its place came a subtle fear, a fear that swept his brain and left it chisel-sharp and cold with the almost certain knowledge that here he faced an alien threat, a siren threat, a threat that was a lure.

Chambers had told him about a life that could encyst itself, could live in suspended animation; had voiced a fear that the old Martians, who had tried to sweep that life away, had failed.

Could it be that the Asteroid jewels were the encysted life?

Kemp remembered things about the jewels. They never had been analyzed. They were found nowhere else except upon the Asteroids.

The bell might have been the signal for them to awake, a musical note that broke up the encystation, that returned the sleeping entity to its original form.

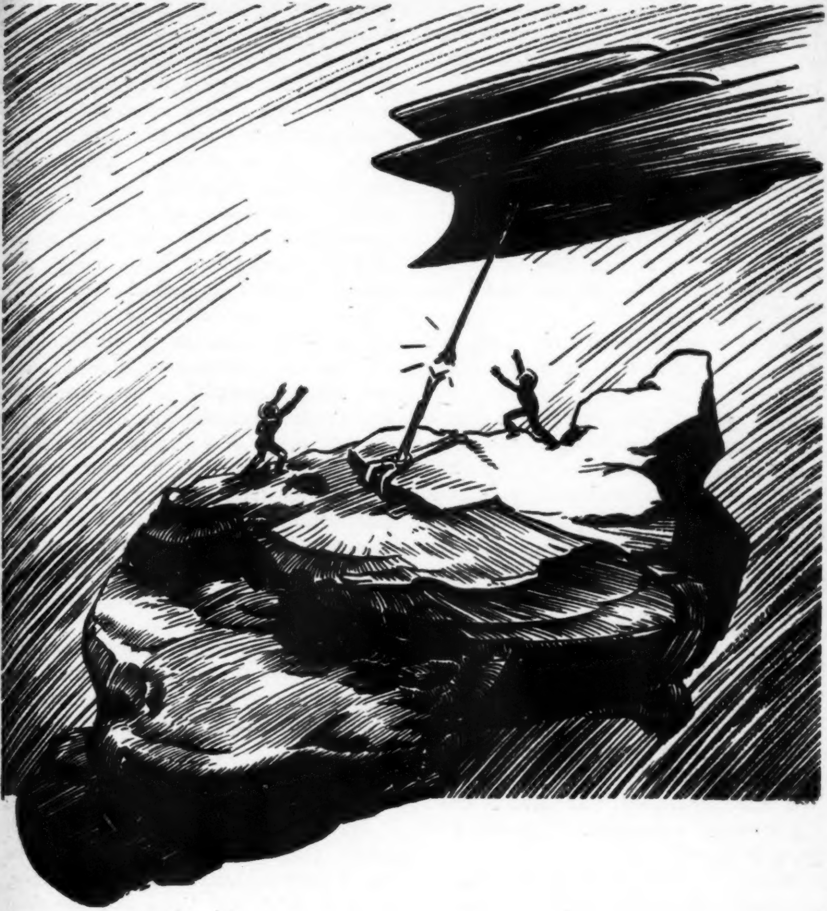
Entities that were able to give peace. Entities that could cure the twisted brains of men, probably by some subtle change of outlook, by the introduction of some mental factor that man had never known before.

Kemp remembered, with a sudden surge of longing, a stinging sense of loss, the mental peace that had reached out to him—for a fleeting moment felt a deep and sharp regret that it had been taken from him.

But despite that ability to give peace the Martians had feared them, feared them with a deep and devastating fear—a fear so great they had destroyed a planet to rid the System of them. And the Martians were an old race and a wise race.

If the Martians had feared them, there was at least good grounds to suspect Earthmen should fear them, too.

And as he stood there, the horror of the situation seeped into Kemp's



brain. A sanitarium that cured mental cases by the simple process of turning those mental cases over to an alien life which had the power to impose upon the mind its own philosophy, to shape the human mind as it willed it should be shaped. A philosophy that started out with the concept of mental peace and ended—where?

But that was something one couldn't figure out, Kemp knew—something there was no way to figure out. It could lead anywhere. Especially since one had no way of knowing what sort of mental concepts the aliens of the fifth planet might hold. Concepts that might be good or ill for the human race, but concepts that certainly would not be entirely human.

Clever! So clever that Kemp wondered now why he had not suspected sooner, why he had not smelled a certain rottenness. First the garden to lull one into receptiveness—that odd feeling one had always known this place, making him feel that he was at home so he would put his guard down. Then the painting—meant, undoubtedly to establish an almost hypnotic state, designed to hold a man transfixed in rapt attention until it was too late to escape the attention of the reawakened life. If, in fact, anyone would have wanted to escape.

That was the insidious part of it—they gave a man what he wanted, what he longed for, something he missed out in the older worlds of struggle and progress. Like a drug—

Claws rattled on the floor.

"Hannibal!" yelled Kemp. But Hannibal didn't stop.

Kemp plunged toward the door, still calling. "Hannibal! Hannibal, come back here!"

Far up the slope there was a rustle in the bushes. A tiny pebble came tapping down the hill.

"Peace be on you," said a familiar voice, and Kemp spun around. The old man with the brown robe and the long white whiskers stood in the narrow path.

"Is there anything wrong?" asked the oldster.

"No," said Kemp. "Not yet. But there's going to be!"

"I do not—"

"Get out of my way," snapped Kemp. "I'm going back!"

The blue eyes were as calm as ever, the words as unhurried. "No one ever goes back, son."

"Gramp," warned Kemp grimly, "if you don't step in here so I can go down the path—"

The old man's hands moved quickly, plunging into the pockets of his robe. Even as Kemp started forward they came out again, tossed something upward and for one breathless instant Kempt saw a dozen or more gleaming Asteroid jewels shimmering in the air, a shower of flashing brilliance.

Bells were clamoring, bells all over the Asteroid, chiming out endlessly that one clear note, time after time, stabbing at Kemp's brain with the clarity of their tones—turning those sparkling jewels into things that would grasp his mind and give him peace and make him something that wasn't quite human.

With a bellow of baffled rage, Kemp charged. He saw the old man's face in front of him, mouth open, those calm eyes now deep pools of hatred, tinged with a touch of fear. Kemp's fist smacked out, straight into the face, white whiskers and all. The face disappeared and a scream rang out as the oldster toppled off the ledge and plunged toward the rocks below.

Cool fingers touched Kemp's brain, but he plunged on, almost blindly, down the path. The fingers slipped away and others came and for a moment the peace rolled over him once again. With the last dregs of will power he fought it off, screaming like a tortured man, keeping his legs working like pistons. The wind brought the scent of apple blossoms to him and he wanted to stop beside the brook and take off his shoes and know the feel of soft green grass beneath his feet.

But that, one cold corner of his brain told him, was the way they wanted him to feel, the very thing Sanctuary wanted him to do. Staggering, he ran, reeling drunkenly.

He staggered, and as he fell his hand struck something hard and he picked it up. It was a branch, a dead branch fallen from some tree. Grimly, he tested it and found it hard and strong, gripped it in one hand and stumbled down the path.

The club gave him something—some strange psychological advantage—a weapon that he whirled around his head when he screamed at the things that would have seized his mind.

Then there was hard ground beneath his feet—the spaceport. Men ran toward him, yelling at him, and he sprinted forward to meet them, a man that might have been jerked from the caves of Europe half a million years before—a maddened, frothing man with a club in hand, with a savage gleam in his eyes, hair tousled, shirt ripped off.

The club swished and a man slumped

to the ground. Another man charged in and the club swished and Harrison Kemp screamed in killing triumph.

The men broke and ran, and Kemp, roaring, chased them down the field.

Somehow he found his ship and spun the lock.

Inside, he shoved the throttle up the rack, forgetting about the niceties of take-off, whipping out into the maw of space with a jerk that almost broke his neck, that gouged deep furrows in the port and crumpled one end of the hangar.

Kemp glanced back just once at the glowing spot that was Sanctuary. After that he kept his face straight ahead. The knotted club still lay beside his chair.

Dr. Daniel Monk ran his finger around the inside of his collar, seemed about to choke.

"But you told me," he stammered. "You sent for me—"

"Yes," agreed Spencer Chambers, "I did tell you I had a Martian. But I haven't got him now. I sent him away."

Monk stared blankly.

"I had need of him elsewhere," Chambers explained.

"I don't understand," Monk declared weakly. "Perhaps he will be coming back."

Chambers shook his head. "I had hoped so, but now I am afraid . . . afraid—"

"But you don't realize what a Martian would mean to us!" Monk blurted.

"Yes, I do," declared Chambers. "He could read the manuscripts. Much more easily, much more accurately than they can be translated. That was why I sent for you. That, in fact, was how I knew he was a Martian in the first place. He read some of the photostatic copies of the manuscripts you sent me."

Monk straightened in his chair. "He read them! You mean you could talk with him!"

Chambers grinned. "Not exactly talk with him, Monk. That is, he didn't make sounds like you and I do."

The chairman of the Solar Control Board leaned across the desk.

"Look at me," he commanded. "Look closely. Can you see anything wrong?"

Monk stammered. "Why, no. Nothing wrong. Those glasses, but a lot of people wear them."

"I know," said Chambers. "A lot of people wear them for effect. Because they think it's smart. But I don't. I wear mine to hide my eyes."

"Your eyes!" whispered Monk. "You mean there's something—"

"I'm blind," said Chambers. "Very few people know it. I've kept it a careful secret. I haven't wanted the world's pity. I don't want the knowledge I can't see hampering my work. People wouldn't trust me."

Monk started to speak, but his words dribbled into silence.

"Don't feel sorry for me," snapped Chambers. "That's the very thing I've been afraid of. That's why no one knows. I wouldn't have told you except I had to tell to explain about Hannibal."

"Hannibal?"

"Hannibal," said Chambers, "is the Martian. People thought he was my pet. Something I carried around with me because of vanity. Because I wanted something different. Something to catch the headlines. But he was more than a pet. He was a Seeing-eye dog. He was my eyes. With Hannibal around I could see. Better than I could see with my own eyes. Much better."

Monk started forward, then settled back. "You mean Hannibal was telepathic?"

Chambers nodded. "Naturally telepathic. Perhaps it was the way the Martians talked. The only way they could talk. He telepathed perfect visual images of everything he saw and in my mind I could see as clearly, as perfectly as if I had seen with my own eyes. Better even, for Hannibal had powers of sight a human does not have."

Monk tapped his fingers on the chair arm, staring out the window at the pines that marched along the hill.

"Hannibal was found out in the Asteroids, wasn't he?" Monk asked suddenly.

"He was," said Chambers. "Until a few days ago I didn't know what he was. No one knew what he was. He was just a thing that saw for me. I tried to talk with him and couldn't. There seemed no way in which to establish a communication of ideas. Almost as if he didn't know there was such things as ideas. He read the newspapers for me. That is, he looked at the page, and in my mind I saw the page and read it. But I was the one that had to do the reading. All Hannibal did was telepath the picture of the paper to me and my mind would do the work. But when I picked up the manuscript photostats it was Hannibal who read. To me they meant nothing—just funny marks. But Hannibal knew. He read them to me. He made me see the things they said. I knew then he was a Martian. No one else but a Martian, or Dr. Monk, could read that stuff."

He matched his fingers carefully. "I've wondered how, since he was a Martian, he got into the Belt. How he could have managed to survive. When we first found him there was no reason to suspect he was a Martian. After all, we didn't know what a Martian was. They left no description of themselves. No paintings, no sculptures."

"The Martians," said Monk, "didn't run to art. They were practical, deadly serious, a race without emotion."

He drummed his fingers along the chair arm again. "There's just one thing. Hannibal was your eyes. You needed him. In such a case I can't imagine why you would have parted with him."

"I needed to see," said Chambers, "in a place I couldn't go."

"You . . . you. What was that?"

"Exactly what I said. There was a place I had to see. A place I had to know about. For various reasons it was closed to me. I could not, dare not, go there. So I sent Hannibal. I sent my eyes there for me."

"And you saw?"

"I did."

"You mean you could send him far away—"

"I sent him to the Asteroids," said Chambers. "To be precise, to Sanctuary. Millions of miles. And I saw what he saw. Still see what he sees, in fact. I can't see you because I'm blind. But I see what's happening on Sanctuary this very moment. Distance has no relation to telepathy. Even the first human experiments in it demonstrated that."

The phone on Chambers' desk buzzed softly. He groped for the receiver, finally found it, lifted it. "Hello," he said.

"This is Moses Allen," said the voice on the other end. "Reports are just starting to come in. My men are rounding up the Asteroid jewels. Got bushels of them so far. Putting them under locks you'd have to use atomics to get open."

Worry edged Chambers' voice. "You made sure there was no slip. No way anyone could get wind of what we're doing and hide out some of them."

Allen chuckled. "I got thousands of men on the job. All of them hit at the same minute. First we checked records of all sales. To be sure we knew just who had them and how many. We haven't got a few of them yet, but we know who's got them. Some of the owners are a little stubborn, but we'll sweat it out of them. We know they've got them cached away somewhere."

He laughed. "One funny thing, chief. Old Lady Templefinger—the society dame, you know—had a rope of them, some of the finest in the world. We can't find them. She claims they disappeared. Into thin air, just like that. One night at a concert. But we—"

"Wait a second," snapped Chambers. "A concert, you said?"

"Sure, a concert. Recital, I guess, is a better name for it. Some long-haired violinist."

"Allen," rapped Chambers, "check up on that recital. Find out who was there. Drag them in. Hold them on some technical charge. Anything at all, just so you hold them. Treat them just as if they were people who had been cured by Sanctuary. Grab on to them and don't let them go."

"Cripes, chief," protested the Secret Service man, "we might run into a barrel of trouble. The old lady would've had some big shots—"

"Don't argue," shouted Chambers. "Get going. Pick them up. And anyone else who was around when any other jewels evaporated. Check up on all strange jewel disappearances. No matter how far back. Don't quit until you're sure in every case. And hang onto everybody. Everyone who's ever had anything to do with Sanctuary."

"O. K.," agreed Allen. "I don't know what you're aiming at, but we'll do—"

"Another thing," said Chambers. "How about the whispering campaign?"

"We've got it started," Allen said. "And it's a lulu, chief. I got busybodies tearing around all over the Solar System. Spreading the word. Nothing definite. Just whispers. Something wrong with Sanctuary. Can't trust them. Can't tell what happens to you when you go there. Why, I heard about a guy just the other day—"

"That's the idea," approved Chambers. "We simply can't tell the real story, but we have to do something to stop people from going there. Frighten them a bit, make them wonder."

"Come morning," said Allen, "and the whole System will be full of stories. Some of them probably even better than those we started with. Sanctuary will starve to death waiting for business after we get through with them."

"That," said Chambers, "is just exactly what we want."

He hung up the phone, fumbling awkwardly, then turned his head toward Monk.

"You heard?" he asked.

"Enough," said Monk. "If it's something I should forget—"

"It's nothing you should forget," Chambers told him. "You're in this with me. Clear up to the hilt."

"I've guessed some of it," said Monk. "A lot of it, in fact. Found some of it from hints in the manuscripts. Some from what I've heard you say. I've been sitting here, trying to straighten it out, trying to make all the factors fall together. The Asteroid jewels, of course, are the encysted life form from the fifth planet and someone on Sanctuary is using them to do to us just what they planned to do to the Martian race—may have done to the Martian race."

"The man out on Sanctuary," said Chambers, "is Jan Nichols, but I doubt if he is using the asterites. More probably they are using him. Some years ago he headed an expedition into the Belt and disappeared. When he came to light again he was the head of Sanctuary. Somehow, while he was out there, he must have come under control of the asterites. Maybe someone played a violin, struck just the right note when he had an Asteroid jewel on his person. Or it might have happened some other way. There's no way of knowing. The worst of it is that now he probably is convinced he is engaged in a great crusade. That's the most dangerous thing about the asterites or the fifth-planet people or whatever you want to call them. Their propaganda is effective because once one is exposed to them he becomes one of them, in philosophy if not in fact and, after all, it's the philosophy, the way of thinking that counts."

Chambers shuddered, as if a cold wind might be sweeping through the room. "It's a beautiful philosophy, Monk. At least, on the surface. God knows what it is underneath. I gained a glimpse of it, several times, through Hannibal. It was that strong, strong enough even to force its way through the veil of hatred that he held for them, powerful enough to reach through the vengeance in his mind. The vengeance that's driving him out there now."

"Vengeance?" asked Monk.

"He's killing them," said Chambers. "As you and I might kill vermin. He's berserk, killing mad. I've tried to call him back. Tried to get him to hide so we can rescue him without the certainty of losing every man we sent out. For some reason, perhaps because he knows them better, hates them more, Hannibal can stand against them. But a man couldn't, a man wouldn't have a chance. Sanctuary is stirred up like a nest of maddened bees."

Chambers' face sagged. "But I can't call him back. I can't even reach him any more. I still see the things he sees. He still keeps contact with me, probably because he wants me to observe, through his mind, as long as possible. Hoping, perhaps, that the human race will take up where he left off—if he leaves off."

"Hannibal is carrying out his destiny," Monk said gravely. "I can patch it together now. Things I didn't understand before. Things I found in the manuscripts. Hannibal slept through time for this very day."

Chambers snapped his head erect, questioningly.

"That's right," said Monk. "The Martians, in their last days, perfected a fairly safe method of suspended animation. Perhaps they used principles they stole from the fifth planet, perhaps not. It doesn't matter. They placed a number of their people in suspended animation. How many, I don't know. The number's there, but I can't read it. It might be a hundred or a thousand. Anyway, it was a lot of them. And they scattered them all over the Solar System. They took some to the Asteroids, some to Earth, some to the Jovian moons, some even out to Pluto. They left them everywhere. They left them in those different places and then the rest of the race went home to die. I wondered why they did it. The symbol was there to tell me, but I couldn't read the symbol."

Chambers nodded. "You have to fill in too many things, the translation leaves too many blanks."

"I had a hunch," Monk said, "it might have been an attempt to preserve the race. A wild throw, you know. A desperate people will try almost anything. Where there's life, there's hope. Hang on long enough and something's bound to happen.

"But I was wrong. I can see that now. They did it for revenge. It ties in with the other things we know about the Martians. Perhaps the asterites had destroyed them. They had tried to destroy the asterites, were sure that they had failed. So they left behind a mop-up squad. The rest of them died, but the mop-up squad slept on against a distant day, playing the million-to-one chance. In Hannibal's case, the long shot paid out. He's doing some mopping-up out in Sanctuary now. It's the last brave gesture of a race that's dead these million years."

"But there are others," said Chambers. "There are—"

"Don't get your hopes up," Monk warned. "Remember the odds. Hannibal carried out his destiny. Even that was more than could have been logically expected. The others—"

"I'm not doing any hoping," Chambers declared. "Not on my own account, anyhow. There's a job to do. We have to do it the best we can. We must guard against the human race going down before the philosophy of these other people. We must keep the human race—human.

"The asterites' creed, on the surface, is beautiful, admittedly. What it is beneath the surface, of course, we cannot know. But admitting that it is all that it appears and nothing more, it is not a human creed. It's not the old hell-for-leather creed that has taken man up the ladder, that will continue to take him up the ladder if he hangs onto it. It would wipe out all the harsher emotions and we need those harsher emotions to keep climbing. We can't lie in the sun, we can't stand still, we can't, not yet, even take the time to stand off and admire the things that we have done.

"Peace, the deeper concept of peace, is not for the human race, never was meant for the human race. Conflict is our meat. The desire to beat the other fellow to it, the hankering for glorification, the tendency to heave out one's chest and say, 'I'm the guy that done it,' the satisfaction of tackling a hard job and doing it, even looking for a hard job just for the hell of doing it."

A springtime breeze blew softly through the window. A bird sang and a hushed clock ticked.

There were faces in the blackness that loomed before the speeding spaceship. Faces that swirled in the blackness and shouted. All sorts of faces. Old men and babies. Well-dressed man-about-town and tramp in tattered rags. Women, too. Women with flying hair and tear-streaked cheeks. All shouting, hooked hands raised in anger.

Faces that protested. Faces that pleaded. Faces that damned and called down curses.

Harrison Kemp passed a hand slowly across his eyes and when he took it away the faces were gone. Only space leered back at him.

But he couldn't shake from his mind the things those mouths had said, the words the tongues had shaped.

"What have you done? You have taken Sanctuary from us!"

Sanctuary! Something the race had leaned upon, had counted on, the assurance of a cure, a refuge from the mental mania that ranged up and down the worlds.

Something that was almost God. Something that was the people's friend—a steadying hand in the darkness. It was something that was there, always would be there, a shining light in a troubled world, a comforter, something that would never change, something one could tie to.

And now?

Kemp shuddered at the thought.

One word and he could bring all that structure tumbling down about their ears. With one blow he could take away their faith and their assurance. With one breath he could blow Sanctuary into a flimsy house of cards.

For him, he knew, Sanctuary was gone forever. Knowing what he knew, he never could go back. But what about those others? What about the ones who still believed? Might it not be better that he left them their belief? Even if it led down a dangerous road. Even if it were a trap.

But was it a trap? That was a thing, of course, that he could not know. Perhaps, rather, it was the way to a better life.

Perhaps he had been wrong. Perhaps he should have stayed and accepted what Sanctuary offered.

If a human being, as a human being, could not carry out his own destiny, if the race were doomed to madness, if evolution had erred in bringing man along the path he followed, what then? If the human way of life were basically at fault, would it not be better to accept a change before it was too late? On what basis, after all, could mankind judge?

In years to come, working through several generations, Sanctuary might mold mankind to its pattern, might change the trend of human thought and action, point out a different road to travel.

And if that were so, who could say that it was wrong?

Bells were ringing. Not the bells he had heard back on Sanctuary, nor yet the bells he remembered of a Sunday morning in his own home town, but bells that came hauntingly from space. Bells that tolled and blotted out his thoughts.

Madness. Madness stalking the worlds. And yet, need there be madness? Findlay wasn't mad—probably never would go mad.

Kemp's brain suddenly buzzed with a crazy-quilt of distorted thought:

Sanctuary . . . Pluto . . . Johnny Gardner . . . what is life . . . we'll try again—

Unsteadily he reached out for the instrument board, but his fingers were all thumbs. His mind blurred and for one wild moment of panic he could not recognize the panel before him—for one long instant it was merely a curious object with colored lights and many unfamiliar mechanisms.

His brain cleared momentarily and a thought coursed through it—an urgent thought. *Man need not go mad!*

Spencer Chambers! Spencer Chambers had to know!

He reached for the radio and his fingers wouldn't work. They wouldn't go where he wanted them to go.

Kemp set his teeth and fought his hand, fought it out to the radio-control knobs, made his fingers do the job his brain wanted them to do, made them work the dials, forced his mouth to say the things that must be said.

"Kemp calling Earth. Kemp calling Earth. Kemp calling—"

A voice said, "Earth. Go ahead, Kemp."

His tongue refused to move. His hand fell from the set, swayed limply at his side.

"Go ahead, Kemp," the voice urged. "Go ahead, Kemp. Go ahead, Kemp."

Kemp grappled with the grayness that was dropping over him, fought it back by concentrating on the simple mechanics of making his lips and tongue move as they had to move.

"Spencer Chambers," he croaked.

"You should have stayed in Sanctuary," blared a voice in his head. *"You should have stayed. You should have—"*

"Spencer Chambers speaking," said a voice out of the radio. "What is it, Kemp?"

Kemp tried to answer, couldn't.

"Kemp!" yelled Chambers. "Kemp, where are you? What's the matter? Kemp—"

Words came from Kemp's mouth, distorted words, taking a long time to say, jerky—

"No time . . . one thing. Hunch. That's it, Chambers . . . hunch—"

"What do you mean, lad?" yelled Chambers.

"Hunches. Have to play . . . hunches. Everyone hasn't . . . got . . . them. Find . . . those . . . who . . . have—"

There was silence. Chambers was waiting. A wave of grayness blotted out the ship, blotted out space—then light came again.

Kemp gripped the side of his chair with one hand while the other swayed limply at his side. What had he been saying? Where was he? One word buzzed in his brain. What was that word?

Out of the past came a snatch of memory.

"Findlay," he said.

"Yes, what about Findlay?"

"Hunches like . . . instinct. See . . . into . . . future—"

The radio bleated at him. "Kemp! What's the matter? Go on. Do you mean hunches are a new instinct? Tell me. Kemp!"

Harrison Kemp heard nothing. The grayness had come again, blotting out everything. He sat in his chair and his hands hung dangling. His vacant eyes stared into space.

The ship drove on.

On the floor lay a stick, a club Harrison Kemp had picked up on Sanctuary.

The intercommunications set buzzed. Fumbling, Chambers snapped up the tumbler.

"Mr. Allen is here," said the secretary's voice.

"Send him in," said Chambers.

Allen came in, flung his hat on the floor beside a chair, sat down.

"Boys just reported they found Kemp's ship," he said. "Easy to trace it. Radio was wide open."

"Yes?" asked Chambers.

"Loony," said Allen.

Chambers' thin lips pressed together. "I was afraid so. He sounded like it. Like he was fighting it off. And he did fight it off. Long enough, at least, to tell us what he wanted us to know."

"It's queer," Monk said, "that we never thought of it. That someone didn't think of it. It had to wait until a man on the verge of insanity could think of it."

"It may not work," said Chambers, "but it's worth a try. Hunches, he said, are instinct—a new instinct, the kind we need in the sort of world we live in. Once, long ago, we had instinct the same as animals, but we got rid of it, we got civilized and lost it. We didn't need it any longer. We substituted things for it. Like law and order, houses and other safeguards against weather and hunger and fear.

"Now we face new dangers. Dangers that accompany the kind of civilization we have wrought. We need new instinct to protect us against those dangers. Maybe we have it in hunches or premonition or intuition or whatever name you want to hang on it. Something we've been developing for a long time, for the last ten thousand years, perhaps, never realizing that he had it."

"All of us probably haven't got it," Monk reminded him. "It would be more pronounced in some of us than others."

"We'll find the ones who have it," declared Chambers. "We'll place them in key positions. The psychologists will develop tests for it. We'll see if we can't improve it, develop it. Help it along.

"You have it, Monk. It saved you when the asterites tried to get you that night in Sandebar. Something told you to heave that jewel against the manuscript case. You did it, instinctively, wondering why. You said that afterward you even speculated on why you did it, couldn't find an answer. And yet it was the proper thing to do.

"Findlay out on Pluto has it. Calls it a feeling for the future, the ability to look just a little ways ahead. That looking just a ways ahead will help us keep one jump beyond our problems.

"Allen has it. He investigated Sanctuary on a hunch, even felt ashamed of himself for doing it, but he went ahead and played his hunch."

"Just a second, chief," Allen interrupted. "Before you go any further there's something to be done. We got to go out and bring in Hannibal. Even if it takes the whole fleet—"

"There's no use," said Chambers.

He rose and faced them.

"Hannibal," he said, "died half an hour ago. They killed him."

Slowly he walked around the desk, felt his way across the room toward the window. Once he stumbled on a rug, once he ran into a chair.

THE END.

IN TIMES TO COME

This month we have the last installment of Fritz Leiber's first science-fiction novel; next month we begin the first—of two—installment of C. L. Moore's first full-length science-fiction novel. Miss Moore's science-fiction is always first quality material—but it also has a unique quality of emotional reality, presenting not simply a picture of another place and time, but the feeling of the other environment.

In "Judgment Night" C. L. Moore has worked up a magnificent story, against a background of a type that hasn't been adequately exploited anywhere in science-fiction before. Two types of backgrounds science-fiction implies, but has not exploited, in fact.

First, dominating a large portion of the first installment is a pleasure-planetoid, where the far advanced science of a distant future can reproduce any condition of warmth or cold, light or dark, pressure or vacuum, gravity or weightlessness, any atmosphere of gases, humidity, wind velocity—anything any human mind can conceive can there be produced in full apparent reality. Yet, in its trickery, made livable for human life. A lovely place—for plotting and death and destruction. For a man who went there to murder. But you'll find your attention as neatly diverted by the trickery of that pleasure planet as his intention was—

And the second background science-fiction implies is in that first installment, too—or the beginning of the development of it. When the author states it is a far distant future, that a dozen civilizations have risen and fallen and risen anew since our day, great civilizations each higher than ours has yet reached, each as dead and forgotten as Babylon—he implies that the deep-buried ruins must exist somewhere. How many ages of forgetfulness must pass before the last traces of the sixth subbasement of the Empire State Building would be wiped out?

If a dozen greater civilizations have left their scars on a planet—somewhere those deep scars must still exist. C. L. Moore does not neglect them, the empty tunnels and vaults of cultures dead a dozen times a decade of millenniums.

But one of the most intriguing things about the whole story, I felt on finishing it, was that I hadn't realized that, from the first scene to the penultimate, it drove steadily in one, inevitable direction, to one, inevitable conclusion. You'll probably discover it with as much of a shock as I did—in the last four hundred words! The Editor.

THE ANALYTICAL LABORATORY

"Gather, Darkness" is Fritz Leiber's first science-fiction novel, and, to the best of my knowledge, the second novel he's done. (His first was "Conjure Wife" for *Unknown Worlds;* it made a resounding hit.) "Darkness" is also just about the first science-fiction of any length Leiber's done. And—he has proven that he is at least one of those badly needed recruits to the ranks of top-notch science-fictioneers we're seeking, by the way the votes stand on the May issue:

Place	*Story*	*Author*	*Points*
1.	Gather, Darkness	Fritz Leiber, Jr.	1.10
2.	Ghost	Henry Kuttner	2.75
3.	Let's Disappear	Cleve Cartmill	2.83
4.	Pacer	Raymond F. Jones	3.33
5.	Fifth Freedom	John Alvarez	3.66

The Editor.

Unthinking Cap

by John Pierce

The people of the future repaid those who came to them from the past for the historical information they gave. They had a gift, a marvelous, yet simple device. Very valuable, too, but not quite as the recipient thought—

Illustrated by Orban

"You've been very co-operative," the chief examiner told Jeffers.

At least they appreciated his acting civilized about it. And he had been co-operative, through two weeks of mental and physical examination. To him it had been purposeless and confusing. To these men it had apparently been worth yanking him from 1940.

The examiner relaxed comfortably in his chair and looked patiently across the desk, as if waiting for Jeffers to talk. Apparently there was no hurry in 3046, although a surprising number of things happened in twenty-four hours. It was an elimination of waiting and waste rather than hurry.

"May I ask if I really helped you?" Jeffers inquired.

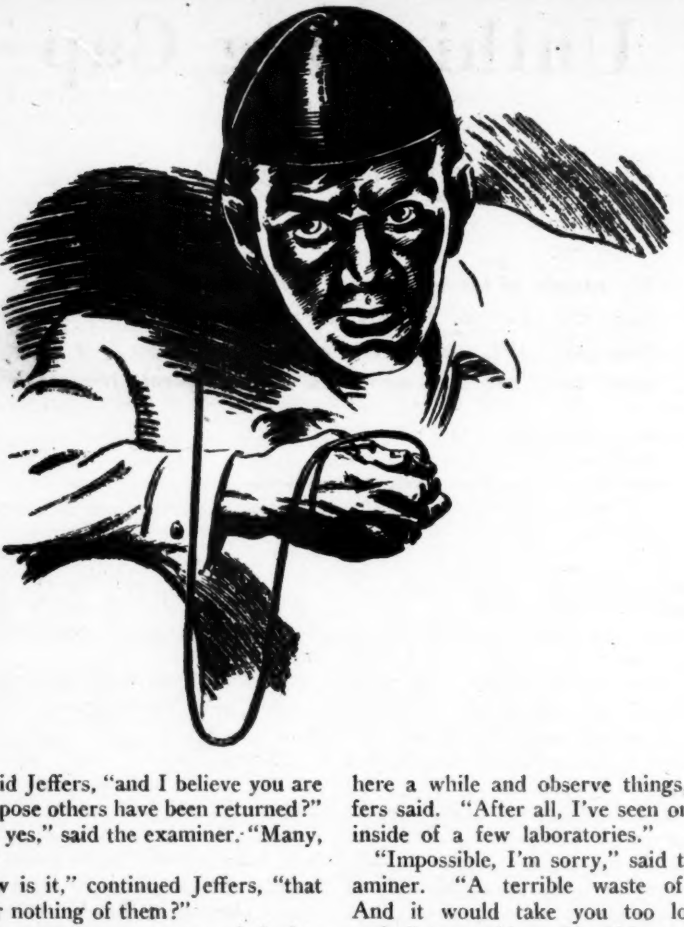
"Oh, certainly. Certainly you did," the examiner replied. "Now, the bacteriologists report that the modification in oreasis has been in line with what they expected. Your physiological changes are quite negligible, of course; evidence of malnutrition, disease impairments, and slight addictions, but minor, indeed. Mental state wholly unadjusted, but capacity completely within tolerances. I don't understand the details myself; my training is purely administrative. But I can assure you, everything was up to expectations. A thorough check."

"But about the past; I should think my historical knowledge—" Jeffers began.

"Waste of time, history," said the examiner. "We understand our own era and have a fair conception of the near future. There's room for improvement, you know; even improvement in the human stock—although that's long-range planning. No observable results yet, except at extremes. You're no different from me, except for training. Of course, a few abnormal psychologists study history as an adjunct, but they already have more material than they can use, and all of it correlates."

The examiner sat idly as if expecting further conversation. Jeffers began to feel quite at ease. He had been too awed by the specialists really to establish communication with them. With this man he was at home. Different ideas, of course, but like Dr. Johnson in the twentieth century rather than a visit with a superman.

"If you are really going to return



me," said Jeffers, "and I believe you are—I suppose others have been returned?"

"Oh, yes," said the examiner. "Many, many."

"How is it," continued Jeffers, "that we hear nothing of them?"

"We can rely on our psychologists completely," the chief examiner said.

"You mean, you can trust me to act as you wish?"

"That's it," said the examiner, "in other words.

"Further," the examiner continued, "you will remember that before the examinations I said that you should not go completely unrewarded. I don't mean just the novelty you have encountered. You may take with you something of value if you wish. Nothing large; the waste of power in transportation is terrific."

"If I had free choice, I'd rather live here a while and observe things," Jeffers said. "After all, I've seen only the inside of a few laboratories."

"Impossible, I'm sorry," said the examiner. "A terrible waste of time. And it would take you too long to assimilate anything. You'd be confused. You have no latent images; no developed classifications, so to speak. You couldn't remember anything worth while."

Jeffers remained unconvinced but silent.

"We'll go to the museum, now," said the examiner. "You may choose something there."

The museum was very impressive to Jeffers. There were no glass cases and no labels. All the objects appeared real and workable. It didn't seem like a museum at all, but like something else familiar. Perhaps, a toy shop.

The invincible weapons appeared truly invincible, but Jeffers shuddered at the thought of using them. He not only hated the thought of killing, but he understood the danger of society to one mortal man, however well armed. The images presented, though, were intriguing, especially visual and auditory hallucinations, violently incapacitating or, at will, causing complete mental collapse. The device for utter disintegrations, impractical because of its violence, seemed trite but impressive.

But Jeffers didn't want destruction. He wanted something that would help him in a personal way, and benefit him financially as well. He was disappointed that there was no immortality machine, or cure-all at least. But, as the examiner pointed out, ailments differ in nature as well as in symptoms. The gold-making machine was attractive, but a little too obvious. The levitation belt was clever, but limited. Who wanted to go flying about to the consternation of others? Most especially if the means could not be reproduced, as the examiner assured him they could not.

Remnants of desire for other wonders faded from Jeffers' mind as the examiner showed him the forgetting machine.

"You mean this is selective forgetting?" Jeffers asked astounded.

"Quite selective," the examiner replied. "Of course, it affects surrounding memories slightly. It disorients the array in memory space completely near the point of concentration, and decreases order progressively less in remote regions. The effects are more diffuse if concentration is incomplete."

It seemed incredible to Jeffers. All there was to it was a black plastic cap, remarkably close-fitting and comfortable, and a slight cord a yard long bearing at its end a button.

"It will be unique in your age," the examiner assured him, as if divining Jeffers' thought. "No one could possibly duplicate it before 2009. That's when limited binding was developed," he added. "Opening the case would merely destroy it."

His mind aswarm with possibilities, Jeffers almost forgot to voice his decision. The examiner waited patiently.

"I'll take this," Jeffers finally managed to say. Then, as an afterthought, "Are there other things to see?"

"No," said the examiner. "This is the last."

"It's almost," thought Jeffers, "as if he knew I would choose it."

On the way to the time machine, carrying the forgetting machine in his own hands, Jeffers asked if it was much used.

"Very, very little," the examiner replied.

"But don't you have unpleasant memories?" asked Jeffers.

"Nothing unpleasant happens to us," the examiner said, "except once in a great while, by accident."

"Death?" asked Jeffers.

"Death is inevitable," said the examiner as lightly as Jeffers might have said that rain is unpleasant.

"But mysterious," Jeffers felt impelled to add.

"I suppose it may be, to you," the examiner replied, with what seemed a faint trace of interest, surprise, or recollection.

"But don't you do things you want to forget?" asked Jeffers.

"Of course not," said the examiner. "Why should we?"

"Why don't you?" Jeffers asked, resolved not to be put off.

The examiner was silent for a moment, perhaps framing an intelligible answer.

"I can't tell you clearly in the time available," he said. "I can say this, though. Would you do such things if your mind were examined thoroughly every six months?"

Jeffers was aghast at the possibility. Then he had a sudden horror.

"Did they do that to me?" he asked.

"Certainly," the examiner answered.

"The third room, that black cabinet in which you lay, and the slightly dizzy feeling."

"And do you know the results?" Jeffers asked in panic.

"Of course," the examiner answered, "that is, a nontechnical résumé of the mind content for cataloguing."

Jeffers walked beside the examiner in stunned silence, wondering how a man who knew his every hidden memory could be so casual. Then he remembered the forgetting machine, and realized that he could rid himself of this, too. He felt reasonably relieved. But how could a whole nation of men put up with this?

"It's terrible!" he exclaimed.

The examiner smiled. "To you, I suppose."

"But, to anyone," Jeffers insisted.

"No," the examiner replied. "It's a matter of training. Does it occur to you that to a barbarian, say . . . no, to a savage—" The examiner paused to examine a notebook. "To a savage taxes or traffic regulations or compulsory education would seem unbearable?"

"I thought you didn't study history," Jeffers remarked.

"I don't," the examiner replied. "These answers were prepared by the psychologists as suited to your probable questions. It's time for your return now."

They entered the place of the time machine, and Jeffers was returned. He arrived in his room after no elapsed 1940 time. He was a little stunned. The conversation with the examiner had left him in a curiously numbed state, with a dreamlike quality hazing the future he had visited. He was glad to find the forgetting machine still in his hands.

Jeffers resolved not to use his treasure in haste. That way lay disaster. Rather, through an afternoon in the park and a long and pleasant dinner at Keen's, he considered ways of employing the gift. At first a flood of embarrassing personal memories occupied his attention. Most of them were not really bad, but merely annoying. How often had he made a fool of himself! Been taken in! Missed an opportunity! That time with the girl— The scene with his first boss. How such stupid things could trouble one in a night of unease.

Now that he could banish them, Jeffers felt a certain roguish delight in turning these memories over in his mind. Indeed, when they were at his mercy, some seemed almost amusing old companions. He would not let them go. But others—and others crossing his mind left him in shuddering squeamishness. How could he have been such a fool?

During dinner, Jeffers thought more of exploiting the machine. A means of making contacts would occur. He had limited time and only one machine, so it must be a purely personal approach, with no advertising. But some individuals should be willing to pay hugely. The grief-stricken, for instance, though many would cherish their grief. And criminals, some of them must have hurt consciences. Or would forgetting interfere with prearranged alibis? Jeffers began to realize that there were difficulties to be considered.

For instance, he must get his pay in advance. After a client had forgotten, he would see no point in paying. Would he try to recover the fee? Jeffers wondered if he could ask what was to be forgotten and then threaten to remind the client. But there was no way of getting the truth. Certainly a man would not tell what he so longed to forget.

While Jeffers sat in his room smoking and letting dinner digest comfortably, the good points of the forgetting machine appealed to him. As he fitted the plastic cap to his head, he resolved to rid himself first of the knowledge that the examiner, and many others in 3046, knew all his mind. Not that it mattered that far in the future. The real test was that it made him unhappy to think of it.

Jeffers reflected that he would know success only in that he would recognize failure. Of course, he could leave a written reminder, but that would destroy the benefit.

He found it surprisingly hard to concentrate clearly. All sorts of irrelevant thoughts crept in. At last, however, he held the memory in his mind and pressed the button.

Jeffers remembered having decided to test the machine. Had he, he wondered? He felt he had. He resolved that he must make a clearer test. Say, choose a trivial memory and leave a written memorandum recording the time at which the button was to be pressed.

The test was successful.

Jeffers relaxed pleasantly, still wearing the cap and fingering the control. With complete success, only choice remained. Be guided by the future; there was no hurry. He allowed his mind to wander freely. He speculated on the machine itself. A queer thing, and what did concentration have to do with it? How did it work? It seemed absurd, the whole idea of a forgetting machine—One of the loud noises not uncommon in cities startled Jeffers, and he pressed the button involuntarily.

To find himself wearing a queer plastic rig on his head and fingering a button on the end of a slight cord puzzled Jeffers considerably. His mind wandered. Confusedly, in examining the control, he pressed the button.

The utterly unfamiliar cord and button confused Jeffers in seeing them for the first time. He pressed the button experimentally—

Even the patrolman could see from the vacant stare that this was a mental case. That queer cap, now, was probably one of these electrical massaging machines, though why it didn't have an attachment plug, and what a man with a fine head of hair was using it for, he didn't know. But then, the man was crazy.

The examiner would have been uninterested to know that the psychological findings had checked completely, although perhaps a little sooner than might have been expected. The findings always did check; hadn't Jeffers taken the predicted machine and asked the predicted questions? Of course, the predictions had a margin of error, and a certain generality. Had the examiner been asked if this meant a limited degree of free will, he would have been as puzzled as to answer whether or not there are borogroves.

THE END.

PEPSI-COLA HITS THE SPOT!
GOOD!
GOOD!
GOOD!

The Great Engine

by A. E. van Vogt

There are times when—even in peacetime—science serves better in silence and by stealth. The man who found the mighty engine, dropped from a spaceship, had a chance to do that.

Illustrated by Fax

The blue-gray engine lay half buried in a green hillside.

It lay there in that summer of 1948, a soulless thing of metal and of forces more potent than life itself. Rain washed its senseless form. A July, then an August sun blazed down upon it. In the night the stars looked down wanly, caring nothing for its destiny.

The ship it drove had been nosing down into Earth's atmosphere when the meteorite plowed through the metal that held it in place. Instantly, in the irresistibleness of its terrible strength, the engine tore to shreds what remained of the framework and plunged through the gaping meteorite hole, down, down.

For all the weeks since then it had lain in the hillside seemingly lifeless but, actually, in its great fashion, utterly alive.

There was dirt in its force field, so tightly packed that it would have taken eagle eyes to see how swiftly it was spinning. Not even the boys who sat one day on a flange of the engine noticed the convulsions of the dirt.

If one of them had poked a grimy hand into the inferno of energy that was the force field, muscles, bones, blood would have spurted like gas exploding.

But the boys went away; and the engine lay there until the day the searchers passed along the bottom of the hill. Discovery was as close as that. There were two of them, two alert, trained observers who anxiously scanned the hillside. But a cloud was veiling the brightness of the sun, and they passed on unseeing.

It was more than a week later, late in the afternoon, when a horse climbing the hill straddled the protruding bulge of the engine. The horse's rider proceeded to dismount in an astounding fashion.

With his one hand he grasped the saddlehorn and *lifted* himself clear of the saddle. Casually, easily, he brought his left leg over, held himself poised in midair, and then dropped to the ground.

The display of strength seemed all the more effortless because the action was entirely automatic; his attention was concentrated the whole while on the thing in the ground.

His lean face twisted as he examined the machine. He glanced around, eyes suddenly narrowed; then he smiled sardonically as he realized the thought in his mind.

Finally, he shrugged. Fat chance of anybody seeing him out here. The town of Crescentville was more than a mile away; and there was no sign of life around the big white house which stood among trees a third of a mile to the northwest.

He was alone with his horse and the machine; and, after a moment, his voice echoed with cool irony on the twilight air:

"Well, Dandy, here's a job for us. This scrap should buy you quite a bit of feed. We'll haul it to the junk dealer after dark. That way she won't find out and we'll save some remnant of our pride. She—"

He stopped. Involuntarily, he turned to stare at the gardenlike estate whose width stretched for nearly a mile between himself and the town. A white fence, misty and halo-ish in the twilight, made a vast circuit around a green, verdant land of trees and pasture. The fence kept disappearing down gullies and into brush. It vanished finally in the north beyond the stately white house.

The man shook himself impatiently. "What a fool I've been, hanging around Crescentville waiting for her to—" He cut the words with a mental effort and turned to stare down at the engine. "Have to get some idea of its weight—wonder what it is."

He climbed to the top of the hill and came down again carrying a piece of deadwood about four feet long and three inches in diameter. He began to pry the engine loose from the ground.

It was awkward work with only a left arm; and so, when he noticed the dirt-plugged hole in the center, he jabbed the wood into it to get better leverage.

His shout of surprise and pain echoed hoarsely on the evening air.

For the wood jerked. Like a shot twisted by the rifled barrel of a gun, like a churning knife, it wrenched in his hand, tearing like a shredder, burning like fire.

He was lifted up, up—and flung twenty feet down the hill. Groaning, clutching his tattered hand to his body, he stumbled to his feet.

The sound died on his lips, then, as his gaze fastened on the throbbing, whirling thing that had been a dead branch of tree.

He stared. Then he climbed, trembling, onto the black horse. Nursing his bloodied hand, blinking from sheer agony, he raced the animal down the hill and toward the highway that led to the town.

A stone boat and harness for Dandy rented from a farmer—rope and tackle—a hand stiff with bandages, still numb with pain—a trek through darkness with a thrumming thing on the stone boat—for three hours Pendrake felt himself a creature in a nightmare, running madly in all directions.

But here was the engine now, on the floor of his stable, safe from discovery except for the sound that was pouring forth from the wood in its force field.

It was funny how his mind had worked. The determination to transport the engine secretly to his own cottage had been like choosing life instead of death, like swiftly picking up a hundred-dollar bill lying on a deserted street: so automatic as to be beyond the need of logic.

It still seemed as natural as living.

The yellow glow from the lantern filled the interior of what had once been a large private garage and workshop. In one corner Dandy stood, black hide aglint, eyes glistening, as he turned his head to stare at the thing that shared his quarters.

The not unpleasant smell of horse was thick now that the door was closed.

The engine lay on its side near the door; and the main trouble was that the wood in it wasn't straight. It slogged away against the air like some caricature of a propeller, beating a sound out of the atmosphere by the sheer violence and velocity of its rotation.

About eight thousand revolutions a minute, Pendrake estimated and stood stunned, striving to grasp the kind of machine that could snatch a piece of wood, and—

His mind sagged before the mystery; and he gave it up. But a black frown creased his face as he stared down at the speed-blurred wood.

He couldn't just grab it. And, while undoubtedly there were a number of tools in the world that could grip a whirling bar and pull on it, they were not available here in this lantern-lighted stable.

He thought: "There must be a control, something to switch off the power."

But the bluish-gray, doughnut-shaped outer shell was glass smooth. Even the flanges that projected from four ends, and in which were the holes for bed bolts, seemed to grow out of the shell, as if they had been molded from the same block of metal, as if there had been a flowing, original design that spurned anything less than oneness.

Baffled, Pendrake walked around the machine. He had the empty conviction that the problem was beyond the solution of a man who had as his working equipment one badly maimed and bandaged hand.

He noticed something. The machine lay solidly, heavily, on the floor. It neither jogged nor jumped. It made not the slightest effort to begin a sedate, reactionary creep in opposition to the insanely whirling thing that bristled from its middle.

The engine was ignoring the law that action and reaction are equal and opposite.

With abrupt realization of the possibilities, Pendrake bent down and heaved at the engine. Instantly, knives of pain hacked at his hand. Tears shocked into his eyes. But when he finally let go the engine was standing on one of its four sets of flanges; and the crooked wood was spinning, no longer vertically, but roughly horizontal to the floor.

The pulse of agony in Pendrake's hand slowed. He wiped the tears from his eyes and proceeded to the next step in the plan that had occurred to him.

Nails! He drove them into the bed bolt holes, and bent them over the metal. That was just to make sure the narrow-based engine wouldn't topple over in the event that he bumped too hard against the outer shell.

An apple box came next. Laid lengthwise on its side, it reached up to within half an inch of the exact center of the large hole, from the opposite side of which the wood projected. Two books held steady a piece of one-inch piping about a foot long. It was painful holding the small sledge hammer in that lame hand of his, but he struck true.

The piece of piping recoiled from the hammer, banged into the wood where it was held inside the hole of the engine, knocked it out.

There was a crash that shook the garage. After a dazed moment, Pendrake grew aware of a long, splintered slash in the ceiling, through which the four-foot piece of deadwood had bounced after striking the floor.

Slowly, his reverberating mind gravitated into a rhythm with the silence that was settling. Pendrake drew a deep breath. There were still things to discover, a whole, new machine world to explore. But one thing was clear:

He had conquered the engine.

At midnight he was still awake. He kept getting up, dropping the magazine he was reading, and going into the dark kitchen of the cottage to peer out at the darker garage.

But the night was quiet. No marauders disturbed the peace of the town. Occasionally, a car motor sounded far away.

The dozenth time he found himself pressing his face against the cool pane of the kitchen window, Pendrake cursed aloud and went back into the living room muttering invective.

What was he trying to do! He couldn't hope to keep that engine. It must be a new invention, a radical post-war development—lying on that hillside because of an accident that a silly ass who never read papers, or listened to the radio, wouldn't know anything about.

Somewhere in the house, he remembered, was a New York *Times* he'd bought not so long ago. He found the paper on his magazine rack with all the other old and unread papers and magazines he'd bought from time to time.

The date at the top was June 7, 1947; and this was August 16th. Not too great a difference. It—

But this wasn't 1947. This was 1948!

With a cry Pendrake leaped to his feet, then slowly sank back into his chair. It was an ironic picture that came then, a kaleidoscope of the existence of a man so untouched by the friction of time that fourteen months had glided by like so many days.

Lazy, miserable hound, Pendrake thought in a blaze of fury, using his lost arm and an unforgiving woman as an excuse for lying down on life. That was over. All of it. He'd start again—

He grew aware of the paper in his hand; and all the irony went out of him as in a gathering excitement he began to glance at the headlines:

PRESIDENT CALLS ON NATION FOR NEW INDUSTRIAL EFFORT

Two Hundred Billion Dollar National Income Only Beginning, He Says.

GERMANY RECOVERING SWIFTLY UNDER UNITED NATIONS PLAN

Shaposhenko Punishment for Leaders Having Rejuvenating Effect on People, Occupation Authorities State.

350,000 FAMILY PLANES SOLD FIRST FIVE MONTHS OF 1947

IS THERE LIFE ON OTHER PLANETS?

Expect 200 Inch Telescope To Provide New Evidence—To Be Completed Next Year.

Pendrake's mind froze at that point, froze so hard on the thought that came that a pain stabbed through his head. He shook himself. He thought: "It was impossible! An engine that merely turned an axle in however wonderful a fashion wasn't a spaceship drive whatever else it might be."

No, no—the situation was really simple. He had crept away into this little cottage of his, almost right out of the world. Life had gone on dynamically; and somewhere not so long ago a tremendous invention had spawned out of that surging tide of will and ambition and creative genius.

Tomorrow he would try to get a mortgage on this cottage; that would provide him with a little cash, and break forever the thrall of the place. Dandy he'd send over to Eleanor in the same fashion that she had sent him three years ago—without a word. The green pastures of the estate would be like heaven for an animal that had starved too long now on an ex-airman's pension. As for the engine—

He must have slept at that point. Because he woke up at 3:00 a. m., sweating with fear. He was out in the night and clawing open the door of the garage-stable—before realization penetrated that he had had a bad dream.

The engine was still there, the foot-long piece of piping in its force field. In the beam of his flashlight the piping glinted as it turned, shone with a brown glow that was hard to reconcile with the dirty, rusted, extruded metal thing he had ransacked out of his basement.

It struck Pendrake after a moment, and for the first time, that the pipe was turning far more slowly than had the piece of wood, not a quarter so fast, not more than fourteen or fifteen hundred revolutions per minute. The rate of rotation must be governed by the kind of material—based on atomic weight, or density, or something.

Slowly, conscious that he mustn't be seen abroad at this hour, Pendrake shut the door and returned to the house. He felt no anger at himself, or at the brief frenzy that sent him racing into the night. But the implications were troubling.

It was going to be hard to give the engine up to its rightful owner. Damned hard!

Forty issues of the weekly Crescentville *Clarion* yielded exactly nothing. Pendrake read the first two news pages of each edition, missing not a single heading. But there was no report of an air crash, no mention of a great new-engine invention.

He went out, finally, into the hot August morning, a haze of exhilaration tingling along his nerves. It couldn't be, it *couldn't* be; and yet—

If this kept on the engine was his.

The bank manager said: "A mortgage on the cottage. It isn't necessary. You have a large account here."

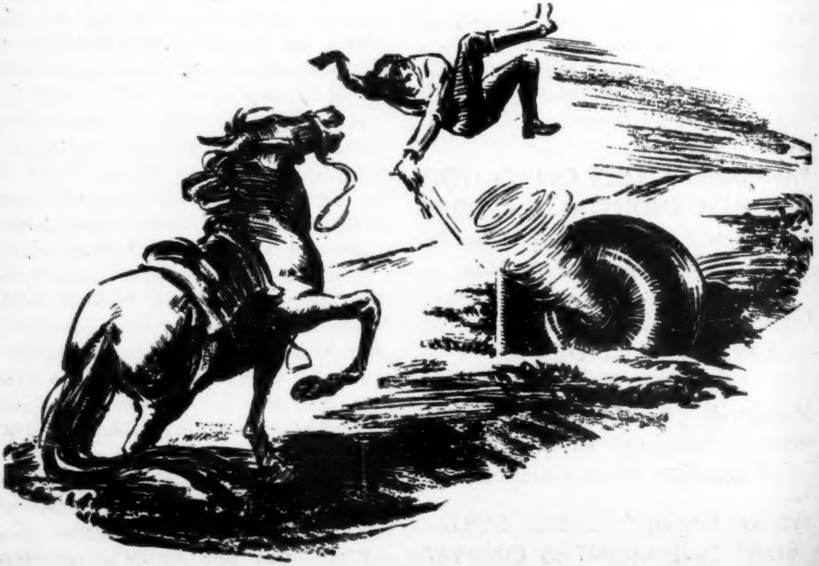
"Eh?" Pendrake said.

It was the expression on the man's smooth-jowled face, the faint, secret smile that warned him. The manager, whose name Pendrake remembered as Roderick Clay, said easily:

"As you know, when you went to China with the Army Air Force, you signed all your possessions over to your wife, with the exception of the cottage where you now live; and that, as I understand it, was omitted accidentally."

Pendrake nodded, not trusting himself to speak. He knew now what was coming; and the manager's words only verified his realization. The manager said:

"At the end of the war, a few months after you and your wife separated, she secretly reassigned to you the entire property, including bonds, shares, cash, real estate, as well as the Pendrake estate, with the stipulation that you not be advised of the transfer until you actually inquired, or in some other fashion indicated your need for money.



She further stipulated that, in the interim, she be given a minimum living allowance with which to provide for the maintenance of herself and the Pendrake home.

"I may say"—the man was bland, smug, satisfied with the way he had carried off an interview that he must have planned in his idle moments with anticipatory thrills—"your affairs have prospered with those of the nation. Stocks, bonds and cash on hand total about two hundred and ninety-four thousand dollars. Would you like me to have one of the clerks draw up a check for your signature? How much?"

It was hotter outside. Pendrake walked back to the cottage, thinking: He should have known Eleanor would pull something like that. These passionate, introvert women— Sitting there that day he had called, cold, remote, unable to break out of her shell of reserve—sitting there knowing she had placed herself financially at his mercy.

He'd have to think out the implications, plan his approach, his exact words, actions—meanwhile there was the engine.

It was still there. He glanced cursorily in at it, then padlocked the door again. On the way to the kitchen entrance he patted Dandy, who was staked out on the back lawn.

Inside, he searched for, and found, the name of a Washington patent firm. He'd gone to China with the son of a member. Awkwardly, he wrote his letter. On his way to the post office to mail it, he stopped off at the only machine shop in town and ordered a wheellike gripping device, a sort of clutch, the wheel part of which would whirl with anything it grasped.

The answer to his letter arrived two days later, before the "clutch" was completed. The letter said:

DEAR MR. PENDRAKE: As per your request, we placed the available members of our Research Department on your problem. All patent office records of engine inventions during the past three years were examined. In addition, I had a personal conversation with the director in charge of that particular department of the patent office. Accordingly, I am in a position to state positively that no radical engine inventions have been patented in any field since the war.

For your perusal, we are inclosing herewith copies of ninety-seven recent engine patents, as selected by our staff from thousands.

Our bill is being sent to you by separate mail. Thank you for your advance check for two hundred dollars.

Sincerely yours,
N. V. HOSKINS.

P. S.: I thought you were dead. I'll swear I saw your name in a casualty list after I was rescued, and I've been mourning you for three years. I'll write you a longer letter in a week or so. I'm holding up the patent world right now, not physically—only the great Jim Pendrake could do a stunt like that. However, I'm playing the role of mental Atlas, and I sure got a lot of dirty looks rushing your stuff through. Which explains the big bill. 'By for now. NED.

Pendrake was conscious of a choking sensation as he read and reread the note. To think how he'd cut himself off from his friends, all those grand fellows—

The phrase "—the great Jim Pendrake" made him glance involuntarily at the empty right sleeve of his sweater.

He smiled grimly; and several minutes passed before he remembered the engine. He thought then: "I'll order an automobile chassis and an engineless plane, and a bar made of many metals—have to make some tests first, of course, and—"

He stopped, his eyes widening with the possibilities. Life was sure opening up. The only thing was—

It was strangely hard to realize that the engine still had no owner but himself.

"What's that?" said a young man's voice behind Pendrake.

It was growing quite dark; and the truck he had hired seemed almost formless in the gathering night. Beside Pendrake the machine shop loomed, a gloomy, unpainted structure. The lights inside the building glimmered faintly through greasy windows.

The machine-shop employees, who had loaded the gripper on the truck for him, were gone through a door, their raucous good nights still ringing in his ears.

Pendrake was alone with his questioner.

With a deliberate yet swift movement he pulled a tarpaulin over the gripper—and turned to stare at the man who had addressed him.

The fellow stood in the shadows, a tall, powerful-looking young man. The light from the nearest street lamp, glinted on high, curving cheekbones, but it was hard to make out the exact contours of the face.

It was the utter lack of casualness in the man that sent a chill through Pendrake. Here was no idler's curiosity, but an earnestness, a determination that was startling.

With an effort, Pendrake caught himself. "What's it to you?" he said curtly.

He climbed into the cab; the engine purred. Awkwardly, Pendrake manipulated the right-hand gear shift and rolled off.

He could see the man in his rear-view mirror, still standing there in the shadows of the machine shop, a tall, strong figure. The fellow started to walk slowly in the same direction that Pendrake was driving. The next second Pendrake whipped the truck around a corner and headed down a side street.

Roundabout, he thought, take a roundabout course to his cottage, then swiftly return the truck to the man from whom he'd rented it, and then—

Something damp trickled down his cheek. He let go the steering wheel and felt his face. It was covered with sweat.

He sat very still; then: "Am I crazy?" he thought. "It's impossible that someone can be secretly searching for the engine."

His jumpy nerves slowly quietened. What was finally convincing was the coincidence of such a searcher standing near a machine shop of a small town at the very instant that Jim Pendrake was there. It was like an old melodrama where the villains were dogging the unsuspecting hero.

Ridiculous!

Nevertheless, the episode emphasized an important aspect of his possession of the engine: Somewhere that engine had been built. Somewhere was the owner.

He must never forget that.

It was darker when he was finally ready. Pendrake entered the garage-stable and turned on the light he had rigged up earlier in the day. The two-hundred-watt bulb shed a sunlike glare that somehow made the small room even stranger than it had been by lantern light.

The engine stood exactly where he had nailed it three nights before. It stood there like a swollen tire for a small, broad wheel; like a large, candied, blue-gray doughnut.

Except for the four sets of flanges and the size, the resemblance to a doughnut was genuinely startling. The walls curved upward from the hole in the center; the hole itself was only a little smaller than it should have been to be in exact proportion. But there the resemblance to anything whatsoever ended.

That hole was the damnedest thing that ever was.

It was about six inches in diameter. Its inner walls were smooth, translucent, nonmetallic in appearance; and in its geometrical center floated the piece of plumber's pipe. Literally, the pipe hung there in space, held in position by a force that seemed to have no origin, a force, oh—

Pendrake drew a deep slow breath, picked up his hammer and gently laid it over the outjutting end of the pipe. The hammer throbbed in his hand, but grimly he bore the pulsing needles of resuscitated pain—and pressed.

The pipe whirred on, unyielding, unaffected. The hammer *brrred* with vibration. Pendrake grimaced from the agony and jerked the tool free.

He waited patiently till his hand ceased throbbing, then struck the protruding end of pipe a sharp blow. The pipe receded into the hole, and nine inches of it emerged from the other side of the engine.

It was almost like rolling a ball.

With deliberate aim Pendrake hit the pipe from the far side. It bounced back so easily that eleven inches of it flowed out, only an inch remaining in the hole.

It spun on like the shaft of a steam turbine, only there was not even a whisper of sound, not the faintest hiss.

Thoughtfully, his face dark, Pendrake sagged back and sat on his heels. The engine was not perfect. The ease with which the pipe and, originally, the piece of wood had been pushed in and out meant that gears or something would be needed—something that would hold steady at high speeds under great strains.

Pendrake climbed slowly to his feet, utterly intent now. He dragged into position the device he had had constructed by the machine shop. It took several minutes to adjust the gripping wheel to the right height. But his patience had a mindless quality.

Finally, however, he manipulated the control lever. Fascinated, he watched the two halves of the wheel close over the one-inch pipe, grip and begin to spin.

A glow suffused his whole body. It was the sweetest, purest pleasure that had touched him in three long years. Gently, Pendrake pulled on the gripping machine, tried to draw it toward him along the floor.

It didn't budge.

He frowned at it. He had the feeling that the machine was too heavy for delicate pressures. Muscle was needed here, and without restraint.

Bracing himself, he began to tug, hard.

Afterward, he remembered flinging himself back toward the door in a frenzy of physical effort. He had a distinct mental picture of the nails that held the engine to the floor pulling out as the engine toppled over toward him.

The next instant the engine *lifted*, lifted lightly in some incomprehensible fashion right off the floor. It whirled there for a moment slowly, propeller-fashion, then fell heavily on top of the gripping machine.

With a crash the wooden planks on the floor splintered. The cement underneath, the original floor of the garage, shattered with a horrible grinding noise as the gripping machine was smashed against it fourteen hundred times a minute.

Metal squealed in torment and broke into pieces in a shattering hail of death. The confusion of sound and dust and spraying concrete and metal was briefly a hideous environment for Pendrake's stunned mind.

Silence crept over the scene like the night following a day of battle, an intense, unnatural silence. There was blood on Dandy's quivering flank, where something had struck with gashing effect. Pendrake stood, soothing the trembling horse, assessing the extent of the destruction.

He saw that the engine was lying on its face, apparently unaffected by the violence it had precipitated with such a casual display of stupendous power. It lay, a glinting, blue-gray thing in the light from the miraculously untouched electric bulb.

It took half an hour to find all the pieces of what had been the gripping machine. He gathered the parts one by one and took them into the house.

The first real experiment with the machine was over, successfully.

He sat in darkness in the kitchen, watching. The minutes ticked by, a calm succession; and there was still no movement outside. Pendrake sighed finally. It was clear that no one had noticed or heard the cataclysm in his garage. Or if they had they didn't give a damn.

The engine was safe.

The easing tension brought a curious awareness of how lonely he was. Suddenly, the very restfulness of the silence oppressed him. He had an abrupt, sharp conviction that his developing victory over the engine wasn't going to be any fun for one man cut off from the world by the melancholia in his character.

He thought drably: He ought to go and see her.

No—he shook himself—come to think of it, that wouldn't work. A genuine introvert like Eleanor acquired an emotional momentum in a given direction. Getting her out of that involved forces similar to the basic laws of hypnotism: The more direct the pressure to change her, the greater would be her innate resistance.

Even if she herself willed to be free, the more determined she became about it, the more deeply she would become involved in the morass of emotions that was her psychic prison. Definitely, it wouldn't do any good to go and see her, but—

Pendrake put on his hat and went out into the night. At the corner drugstore, he headed straight for the phone booth.

"Is Mrs. Pendrake in?" he asked quietly when his call was answered.

"Yes, suh!" The woman's deep voice indicated that there was at least one new servant at the big white house; it was not a familiar voice. "Just a moment, suh."

A few seconds later, Eleanor's rich contralto was saying: "Mrs. Pendrake speaking."

"Eleanor, this is Jim."

"Yes!" Pendrake smiled wanly at the tiny change in her tone, the defensive edge that was suddenly in it.

"I'd like to come back, Eleanor," he said softly.

There was silence, then—

Click!

Out in the night again, Pendrake looked up at the starry heavens. The sky was dark, dark blue; the whole fabric of the universe of Occidental earth was well settled into night. Crescentville shared with the entire Eastern seaboard the penumbral shadows of the great mother planet.

He thought: Maybe it had been a mistake, but now she knew. Her mind had probably gone dead slow on thoughts about him. Now it would come alive again.

He strolled up the back alley to his cottage; and, reaching the yard, suppressed an impulse to climb the tree from which the big white house was visible.

He flung himself on the cool grass of the back lawn, stared at the garage-stable, and—

An engine, he thought shakily, an engine that would spin anything shoved into its force field or, if it resisted, smash it with the ease of power unlimited. An engine through which a shaft could be *pushed,* but from which it could not be *pulled.* Which meant that an airplane propeller need only be fastened to a bar of graded metals—graded according to atomic weight and density, and—

Someone was knocking at the front door of the cottage. Pendrake jumped physically and mentally—and then took the telegram from the boy who had disturbed him. The telegram read:

CABIN MODEL PUMA DELIVERED TO DORMANTOWN AIRPORT TOMORROW STOP SPECIAL ENGINE BRACES AND CONTROLS INSTALLED AS REQUESTED STOP MAGNESIUM ALLOY AND AEROGEL PLASTIC CONSTRUCTION
ATLANTIC AIRCRAFT CORP.

Never, never, never had he been in a plane so fast. All the military machines he'd ever flown, the Lightnings, the Mustangs, Pumas, did not compare even remotely to the machine that quivered like vibrating bar steel before the power of the engine of dreams.

The plane seemed to have no connection with earth. It was a creature of the sky, an arrow discharged by Jove—and when he finally brought it down, Pendrake sat in the control seat, eyes closed, tugging his soul down from the upper heavens, where it had roamed a free spirit.

He sat finally, sobered by the tremendous success. Because—what now?

He could take other flights, of course, but sooner or later his machine, in its silent journeyings, would be remarked. And every day that passed, every hour that he clung to this secrecy, his moral position would grow worse.

Somebody owned the engine. Owned it and wanted it. He must decide once and for all whether or not to advertise his possession of it; to do something decisive, to—

He found himself frowning at the four men who were coming toward him along the line of sheds. Two of them were carrying between them a large tool case and one was pulling a small wagon which had other material on it.

The men stopped fifty feet from Pendrake's plane. The fourth man came forward, fumbling in his pocket. He knocked on the cabin door.

"Something I'd like to ask you, mister!" he yelled.

Pendrake hesitated, cursing silently. He had been told, absolutely assured, that no one else had rented a plane garage at this end of the field, and that the big sheds nearby were empty, for use in future years only.

Impatient, he actuated the lever that opened the door. "What—" he began.

He stopped, choked a little. He stared at the revolver that glittered at him from a hand that was rock steady, then glanced up at a face that—he saw with a start now—was covered by a flesh mask.

"Get out of there."

As Pendrake climbed to the ground the man backed warily out of arm's reach and the other men ran forward, pulling their wagon, carrying their tools. They stowed the stuff into the plane and climbed in. The man with the gun paused in the doorway, drew a package out of the breast pocket of his coat and tossed it at Pendrake's feet.

"That'll pay you for the plane. And remember this, you will only make yourself look ridiculous if you pursue this matter further. This engine is in an experimental stage. We want to explore all its possibilities before we apply for a patent, and we don't intend to have simple secondary patents, improvements and what not hindering our personal development of the invention. That's all."

The plane began to move. In a minute it was lifting. It became a speck in the western sky and was merged into the blue haze of distance.

The thought that came finally to Pendrake was: His decision had been made for him.

His sense of loss grew. And his blank feeling of helplessness. For a while he watched the local planes taking off and landing on the northern runway; a mindless watch it was that left him after ten minutes still without a plan or purpose.

He could go home. He pictured himself sneaking into his cottage in Crescentville like a whipped dog, with the long, long evening still ahead of him.

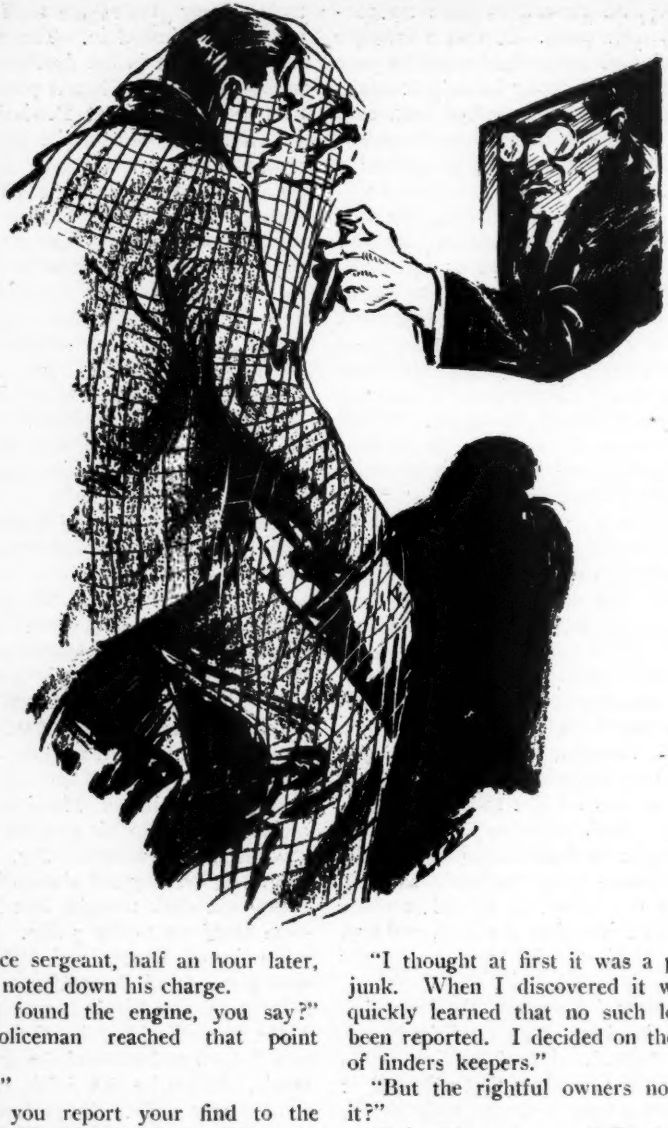
Or—the dark thought knit his brow—he could go to the police. The impulse jarred deeper and brought his first memory of the package that had been thrown at his feet.

He stooped, picked it off the cement, tore it open and counted the green bills inside. When he had finished he mustered a wry smile. A hundred dollars more than he had paid for the Puma.

There was, of course, the fact that it was a forced sale, and—

With abrupt decision Pendrake started the engine of his borrowed truck and headed for the Dormantown station of the State police.

His doubts returned with a rush as



the police sergeant, half an hour later, gravely noted down his charge.

"You found the engine, you say?" The policeman reached that point finally.

"Yes."

"Did you report your find to the Crescentville branch of the State police?"

Pendrake hesitated. It was utterly impossible to explain the instinctive way he had covered up his possession of the engine without the engine as evidence of how unusual a find it was. He said at last:

"I thought at first it was a piece of junk. When I discovered it wasn't I quickly learned that no such loss had been reported. I decided on the policy of finders keepers."

"But the rightful owners now have it?"

"I would say so, yes," Pendrake admitted. "But their use of guns, their secrecy, the way they forced me to sell the plane convinces me I ought to press the matter."

The policeman made a note, then: "Can you give me the manufacturer's number of the engine?"

Pendrake groaned. He went out finally into the gathering dusk feeling that he had fired a dud shot into impenetrable night.

He reached Washington by the morning plane from Dormantown and went at once to the office of Hoskins, Kendlon, Baker & Hoskins, patent attorneys. A moment after his name had been sent in, a slim, dandified young man broke out of a door and came loping across the anteroom.

Oblivious of the startled amazement of the reception clerk, he cried in an intense voice:

"The Air Force's Man of Steel. Jim, I—"

He stopped. His blue eyes widened. Some of the color went out of his cheeks and he stared with a stricken look at Pendrake's empty sleeve. Silently, he pulled Pendrake into his private office. He muttered:

"The man who pulled knobs off doors when he was in a hurry and crushed anything in his hands when he got excited—" He shook himself, threw off the gloom with an effort. "How's Eleanor, Jim?"

Pendrake had known the beginning was going to be hard; as briefly as possible, he explained: "—you know what she was like. She held that job in the research department of the Hilliard Encyclopedia Co., an out-of-the-world existence that I pulled her away from, and—"

He finished after a moment and plunged instantly into a detailed account of the engine. By the time he reached the end of his story, Hoskins was pacing the office floor.

"A secret group with a new, marvelous engine invention. Jim, this sounds big to me. I'm well connected with the Air Force and know Commissioner Blakeley. But there's no time to waste. Have you plenty of money?"

Pendrake nodded doubtfully. "I guess so."

"I mean, we can't waste time on red tape. Can you lay out five thousand dollars for the electron image camera? You know, the one that was invented just as the end of the war? Maybe you'll get your money back, maybe you won't. The important thing is that you go to that hillside where you found the engine and photograph the soil electrons. We must have a picture of that engine to convince the type of cynic that's beginning to show himself in town again, the fellow who won't believe anything he doesn't see, and gives you a sustained runaround if you can't show him."

The man's excitement was contagious. Pendrake jumped up. "I'll leave at once. Where can I get one of those cameras?"

"There's a firm in town that sells them to the government and to various educational institutes for geologic and archæologic purposes. Now, look, Jim, I hate to rush you off like this, I'd like you to come home and meet my wife, but time is of the essence in those photographs. That soil is exposed to the light, and the image will be fuzzing."

"I'll be seeing you," Pendrake said, and started for the door.

The prints came out beautifully clear, the image of the engine unmistakable. Pendrake was sitting in his living room admiring the glossy finish when the girl from the telephone office knocked.

"There's a long-distance call for you from New York," she said. "The party is waiting. Will you come to the exchange?"

"Hoskins," thought Pendrake, though what the man was doing in New York—

The first sound of the stranger voice on the phone chilled him. "Mr. Pendrake," it said quietly, "we have reason to believe that you are still attached to your wife. It would be regrettable if anything should happen to her as a result of your meddling in something that does not concern you. Take heed."

There was a click. The sharp little sound was still echoing in Pendrake's mind minutes later as he walked blankly along the street.

Only one thing stood out clear: The search, the investigation, was over.

The days dragged. For the first time it struck Pendrake that it was the engine that had galvanized him out of his long torpor. And that he had launched on the search as swiftly as he had because deep inside of him had been the realization that without the engine he would have nothing.

It was worse than that. He tried to resume the old tenor of his existence. And he couldn't. The almost mindless rides on Dandy that once had lasted from dawn to dark ended abruptly before 10:00 a. m. on two successive days. And were not resumed.

It wasn't that he no longer wanted to go riding. It was simply life was more than an idler's dream. The three-years' sleep was over.

On the fifth day a telegram arrived from Hoskins:

WHAT'S THE MATTER? I'VE BEEN EXPECTING TO HEAR FROM YOU.
NED.

Uneasily, Pendrake tore the message to shreds. He intended to answer it, but he was still cudgeling his brain over the exact wording of his reply two days later when the letter arrived:

> —cannot understand your silence. I have interested Air Commissioner Blakeley, and some technical staff officers have already called on me. In another week I'll look like a fool. You bought the camera; I checked up on that. You must have the pictures, so for Pete's sake let me hear from you—

Pendrake answered that:

> I am dropping the case. I am sorry that I bothered you with it, but I have found out something which completely transforms my views on the affair, and I am not at liberty to reveal what it is.

Wouldn't reveal it would have been the truth, but it would be inexpedient to say so. These active Air Force officers—he had been one of them in his time—couldn't yet have got into their systems that peace was radically different from war. The threat to Eleanor would merely make them impatient; her death or injury would constitute a casualty list so minor as to be beneath consideration. Naturally, they would take precautions, but—

To hell with them

On the third day after he sent the letter, a taxi drew up before the gate of the cottage; and Hoskins and a bearded giant climbed out.

Pendrake let them in, quietly acknowledged the introduction to the great Blakeley, and sat cold before the storm of questions. After ten minutes, Hoskins was as white as a sheet.

"I can't understand it," he raved. "You took the photos, didn't you?"

No answer.

"How did they come out?"

Silence.

"This thing you learned that transformed your views, did you obtain further information as to who is behind the engine?"

The anguished thought that came to Pendrake was that he should have lied outright in his letter. Such a stupid compromise of a statement he had made, which could not but fail to arouse intense curiosity, had produced this agony of interrogation as surely as—

"Let me talk to him, Hoskins." It was Commissioner Blakeley, and Pendrake felt a distinct relief. A stranger couldn't be worse. He saw that Hoskins was shrugging as he seated himself on the chesterfield and nervously lighted a cigarette.

The big man began in a cool, deliberate tone: "I think what we have here is a psychological case. Pendrake, do you remember that fellow who in 1936 or thereabouts claimed to have an engine that got its power from the air? When the reporters swarmed over his car they found a carefully concealed battery.

"And then," the cold, biting voice

went on, "there was the woman who, two years ago, claimed to have seen a German submarine in Lake Ontario. Her story got wilder and wilder as the navy's investigation progressed, and finally she admitted she had told the story to friends to rouse interest in herself, and when the publicity started she didn't have the nerve to tell the truth. Now, in your case you're being smarter. You—"

The extent of the insult brought a twisted smile to Pendrake's face. He stood like that staring at the floor, listening almost idly to the verbal humiliation he was being subjected to. He felt so remote from the hammering voice that his surprise was momentarily immense as two gigantic hands grabbed his lapels and the handsome, bearded face poked belligerently into his, and the scathing voice blared:

"That's the truth, isn't it?"

He hadn't thought of himself as being wrought up. He had no sense of rage as, with an impatient sweep of his hand he broke the big man's double grip on him, whirled him around, caught him by the scruff of his coat and carried him, kicking and shouting in amazement, into the hallway and through the screen door onto the veranda.

There was a wild moment as Blakeley was heaved onto the lawn below; he came to his feet bellowing. But Pendrake was already turning away. In the doorway he met Hoskins. Hoskins had his coat and bowler hat. He said in a level voice:

"I'm going to remind you of something—" He intoned the words of the great pledge of men of honor; and he couldn't have known that he had won because he walked down the steps without looking back. The waiting taxi was gone before Pendrake grasped how completely those final words had defeated his own purpose.

That night he wrote the letter to Eleanor. He followed it the next day at the hour he had named: 3:00 p. m. When the plump Negress opened the door of the big white house, Pendrake had the fleeting impression that he was going to be told that Eleanor was out.

But she wasn't. He was led through the familiar halls into the forty-foot living room. The Venetian blinds were drawn against the sun; and so it took a moment for Pendrake to make out in the gloom the figure of the lithe young woman who had risen to meet him.

Her voice came, rich, familiar, questioning, out of the dimness: "Your letter was not very explanatory. However, I had intended to see you anyway, but never mind that. What danger am I in?"

He could see her more clearly now. And for a moment he could only stand there, drinking her in with his eyes her slim body, every feature of her face and the dark hair that crowned it. Abruptly, he grew aware that she was flushing under his intense scrutiny. Quickly, he began his explanation.

"My intention," he said, "was to drop the whole affair. But just as I thought I had ended the matter by tossing Blakeley out, I was reminded by Hoskins of my Air Force oath to my country."

"Oh!"

"For your own safety," he went on, more decisive now, "you must leave Crescentville for the time being, lose yourself in the vastness of New York until this matter has been probed to the bottom."

"I see!" Her dark gaze was noncommittal. She looked oddly stiff, sitting in the chair she had chosen, as if she was not quite at ease. She said at last:

"The voices of the two men who spoke to you, the gunman and the man on the phone—what were they like?"

Pendrake hesitated: "One was a young man's voice, the other middle-aged."

"No, I don't mean that. I mean the

texture, the command of language, the degree of education."

"Oh!" Pendrake stared at her. He said slowly: "I hadn't thought of that. Very well educated, I should say."

"English?"

"No, American."

"That's what I meant. Nothing foreign, though?"

"Not the slightest."

They were both, Pendrake realized, more at ease now; and he felt a wondering delight at the cool way she was facing her danger. After all, she wasn't trained to face down physical terrors; and being an introvert wouldn't help her any. Before he could think further, she said:

"This engine—what kind is it? Have you any idea?"

Did he have any idea! He who had racked his brain into the dark watches of a dozen nights!

"It must," said Pendrake carefully, "have grown out of a tremendous background of research. Nothing so perfect could spring full grown into existence without a mighty base of other men's work to build on. Though even with that, somebody must have had an inspiration of purest genius."

He finished quietly: "It's an atomic engine, I should say. It *can't* be anything else. There's no other comparable background."

She was staring at him, looking not quite sure of her next words. She said at last in a formal voice: "You don't mind my asking these questions?"

He knew what *that* meant. She had suddenly become aware that she was thawing—and instantly froze. He thought: "Oh, damn these sensitives." He said quickly, earnestly:

"You have already cleared up some important points. Just where they will lead is another matter. Can you suggest anything else?"

There was silence, then: "I realize," she said slowly, "that I am not properly qualified. I have no scientific knowledge, but I do have my research training. I don't know whether my next question is foolish or not, but—what is the decisive date for atomic energy?"

Pendrake frowned, said: "I think I see what you mean. What is the latest date that an atomic engine COULDN'T have been developed?"

"Something like that," she agreed, bright-eyed.

Pendrake was thoughtful. "I've been reading up on it lately. 1938 might fit—but 1940 is more likely."

"Ten years?"

Pendrake nodded. He knew what she was going to say, and that it was excellent, but he waited for her to say it. She did, after a moment:

"Is there any way you can check up on the activities of every able person who has done atomic research in this country during that time?"

He inclined his head. "I'll go first," he said, "to my old physics professor. He's one of those perpetually young old men who keep abreast of everything. He—"

Her voice, steady, cool, cut him off: "You're going to pursue this search in person?"

She glanced involuntarily at his right sleeve as she finished, then flushed scarlet; and there was no doubt of the memory that was in her mind. Pendrake said swiftly, but with a wan smile:

"I'm afraid there's no one else. As soon as I've made a little progress I'll go to Blakeley and apologize for treating him as I did. Until then, right arm or not, I doubt if there's anyone more capable than I am."

He frowned. "Of course, there is the fact that a one-armed man is easily spotted."

She had control of herself again. "I was going to suggest that you obtain an artificial arm and a flesh mask. Those people must have worn civilian masks if you recognized the disguise so quickly. You can secure the perfect, soldier's type."

She stood up and finished in a level

voice: "As for leaving Crescentville, I had already written my old firm, and they are hiring me in my former position. That was what I intended to see you about. I shall leave the house secretly tonight, and by tomorrow you should be free to pursue your investigations. Good luck."

They faced each other, Pendrake shocked to his core by the abrupt termination of the meeting, and by her words. They parted like two people who have been under enormous strain.

"And that," Pendrake thought as he stood out in the sun's glare, "was the truth."

It was after midnight, September 8th. Pendrake walked, head bent, into a strong east wind along a well-lighted street in the Riverdale section of New York City. He peered at the numbers of the houses as he pressed by: 418, 420, 432.

No. 432 was the third house from the corner; and he walked on past it to the lightpost. Back to the wind, he stood in the bright glow, once more studying his precious list—a final verification.

His original intention had been to investigate every one of the seventy-three eastern Americans on that list, starting with the A's.

But second thought brought the shrewd realization that scientists of firms like Westinghouse, the Rockefeller Foundation, private laboratories with small means, and physicists and professors who were carrying on individual research, were the least likely candidates, the former because of the impossibility of secrecy, the latter because that engine *must* have plenty of money behind it.

Which left three private foundations, by far the wealthiest of these being the Lambton Institute, whose distinguished executive physicist, Dr. McClintock Grayson, lived in the third house from the corner.

He reached the front door of the darkened residence, and experienced his first disappointment. In a dim way he had hoped the door would be unlocked. It wasn't; and that meant all the doors he had opened in his life without ever noticing they were locked would now have to be precedents, proofs that a Yale lock could be broken silently. It seemed different doing it on purpose, but—

Tensing himself, he gripped the knob. And went forward. The lock broke with the tiny click of metal that has been abruptly subjected to unbearable pressure.

In the inky hallway, Pendrake stood for a moment listening. But the only sound was the pounding of his heart. He went forward cautiously, using his flashlight as he peered into doors.

A minute of search verified that the study must be on the second floor. He took the stairs four at a time.

The hallway of the second floor was large with five closed doors and two open ones leading from it. The first open door led to the bedroom; the second—

Pendrake sighed with relief as he tiptoed into a large, cozy room lined with bookshelves. There was a desk in one corner, a small filing cabinet and several floor lamps.

After one swift look he closed the door behind him and turned on the trilight beside the chair next to the desk.

Once again he waited, listening with every nerve tensed. From somewhere near came a faint, regular breathing. But that was all.

The menage of Dr. Grayson was resting peacefully from its day's labors, which—Pendrake reflected as he seated himself at the desk—was where they ought to be. It would be utterly unfair of fate to let him be interrupted now.

At two o'clock he had his man. The proof was a scrawled note abstracted from a mass of irrelevant papers that cluttered one drawer. It read:

The pure mechanics of the engine's operation depends on revolutions per minute. At

very low r. p. m., i. e. fifty to one hundred, the pressure will be almost entirely on a line vertical to the axial plane. If weights have been accurately estimated, a machine will at this stage lift buoyantly, but the forward movement will be almost zero—

Pendrake paused there, puzzled. It couldn't be anything but *the* engine that was being discussed. But what did it mean? He read on:

As the number of r. p. m. increases, the pressure will shift rapidly toward the horizontal, until, at about five hundred revolutions, the pull will be along the axial plane—and all counter or secondary pressure will have ceased. It is at this stage that the engine can be pushed along a shaft, but not pulled. The field is so intense that—

The reference to the shaft was ultimately convincing. Only too well he remembered his own violent discovery that the shaft could not be pulled out of the engine.

The atomic wizard of the age was Dr. Grayson.

Quite suddenly, Pendrake felt weak, ill. He lay back in his chair, strangely dizzy. He thought: "Got to get out of here. Now that I know, I can't take another instant's risk of being caught."

The wild triumph came as the front door closed behind him. He walked down the street, his mind soaring with such a drunken exultancy that he swayed like an intoxicated person.

He was eating breakfast at a lunch counter a mile away when the reaction finally came: So Dr. Grayson, famous *savant,* was the man behind the marvelous engine!

So what now?

In the morning he phoned Hoskins long distance. "It was impossible," he thought, as he waited for the call to be put through, "that he carry on with this tremendous business all by himself.

"If anything should happen to him, what he had discovered would dissolve into the great darkness, perhaps never to be reconstituted. After all, he was here because he had taken to heart a timeless oath of allegiance to his country, an oath that he had not, until reminded, considered relevant—"

His reverie ended as the operator said: "Mr. Hoskins refuses to accept your call, sir."

His problem seemed as old as his existence. As he sat in the hotel library that afternoon, his mind kept coming back to the aloneness of his position, the reality that all decisions about the engine were his to make and his to act upon.

What an incredible fool he was! He ought to put the whole miserable business out of his mind and go to a movie. Or return to Crescentville. The property there would need attention before winter.

But, shuddering, he knew he wouldn't go. What would he do in that lonely town during the long days and the long nights of the coming years?

There was only the engine. All his interest in life, his rebirth of spirit dated from the moment that he had found the doughnut-shaped thing. Without the engine or rather—he made the qualification consciously—without the search for the engine he was a lost soul, wandering aimlessly through the eternity that was *being* on earth.

After a timeless period he grew aware suddenly of the weight of the book in his hands and remembered his purpose in coming to the library. The book was the 1948 edition of the *Hilliard Encyclopedia,* and it revealed that Dr. McClintock Grayson had been born in 1897, that he had one daughter and two sons, and that he had made notable contributions to the fission theory of atomic science.

Of Cyrus Lambton, the *Encyclopedia* said:

—manufacturer, philanthropist, he founded the Lambton Institute in 1936. Since the war, Mr. Lambton has become actively interested in a Back to the Land Movement, the uniquely designed headquarters for this project being located at—

Pendrake went out finally into the warm September afternoon and bought a car. His days became a drab routine. Watch Grayson come out of his house in the morning, follow him till he disappeared into the Lambton Building, trail him home at night.

It seemed endless, purposeless, hopeless. The world became a pattern of gray streets unreeling. He felt himself a wheel turning over and over on its axle, turning, turning, because it was easier to do that than to decide what else his life was good for.

On the seventeenth day the routine broke like a wave striking a wedge of rock. At one o'clock in the afternoon Grayson emerged briskly from the aerogel plastic structure that was the post-war abode of the Lambton Foundation.

The hour in itself was startling. But immediately the difference of this day to the others showed even more clearly. The scientist ignored his gray sedan parked beside the building, walked half a block to a taxi stand, and was driven to a twin-turreted building on Fiftieth Street; a plasto-glitter sign splashed across the two towers:

CYRUS LAMBTON LAND SETTLEMENT PROJECT

As Pendrake watched, Grayson dismissed the taxi; and disappeared through a revolving door into one of the broad-based towers.

Puzzled, but vaguely excited, Pendrake sauntered to a window that had a large glitter sign in it. The sign read:

THE CYRUS LAMBTON PROJECT

wants earnest, sincere young couples who are willing to work hard to establish themselves on rich soil in a verdant and wonderful climate.

Former farmers, sons of farmers and their daughters-of-farmers' wives are especially welcome. No one who desires proximity to a city or who has relatives he must visit need apply. Here is a real opportunity under a private endowment plan.

Three more couples wanted today for the latest allotment, which will leave shortly under the monitorship of Dr. McClintock Grayson. Office open until 11 p. m.

HURRY!

It seemed utterly meaningless, without connection to an engine lying on a hillside. But it brought a thought that wouldn't go away; a thought that was really product of an urge that had been pressing at him for all the dreary days now past.

For an hour he fought the impulse, then it grew too big for his brain, and projected down into his muscles, carried him unresisting to a phone booth.

A minute later he was dialing the number of the Hilliard Encyclopedia Co.

There was a moment while she was being called to the phone. He thought a thousand thoughts, and twice he nearly hung up; and then:

"Jim, what's happened?"

The anxiety in her voice was the sweetest sound he had ever heard. Pendrake held himself steady as he explained what he wanted:

"—you'll have to get yourself an old coat and put on a cheap cotton dress or something; and I'll buy some second-hand things. All I want is to find out what is behind that land-settlement scheme. We could go in before dark this evening. A simple inquiry shouldn't be dangerous, and—"

His mind was blurred with the possibility of seeing her again; and so the uneasy idea of possible danger stayed deep inside him and did not rise to the surface until he saw her coming along the street.

She would have walked right past, but he stepped out and said:

"Eleanor!"

She stopped short; and looking at her it struck him for the first time that the slip of a girl he had married six years before was grown up. She was still slim enough to satisfy any woman, but the richer contours of maturity were

there, too. He grew aware that she was speaking:

"I forgot about the mask, and the artificial arm. They make you look almost—"

Pendrake smiled grimly. "Almost human, eh?"

He knew instantly that he had said the wrong thing. She turned as pale as gray metal. For a panicky moment it seemed to Pendrake that she was going to faint. He caught her arm, cried:

"I'm sorry, Eleanor. I'm a damned idiot. I ought to be shot."

"You had no right to say that," she breathed. "I know I was foolish that day three years ago when you returned from China. I ought not to have screamed when I saw your empty sleeve. But you should have written. You-should-have-written."

She made no move to withdraw her wrist from his fingers, and he could feel the violence of her trembling. He said in an intense voice:

"Eleanor, it was all my fault. My walking out on you in front of all those people—it was the damnedest humiliation ever inflicted on a sensitive woman."

"You were overwrought from your terrible loss; and my scream—"

"I was a scoundrel. I deserve—"

He stopped because she was staring at him with a strange tenderness that made his mind reel. She said: "Let's forget it, Jim. And now, is that the building over there?"

"Eleanor, did you say—"

"We'll have to hurry if we intend to get in before it gets really dark."

"Eleanor, when you said 'let's forget it,' did you mean—"

But Eleanor stood staring across at the building, a complacent smile on her lips.

"Aerogel turrets," she mused aloud, "a hundred and fifty feet high; one completely opaque, windowless, doorless—I wonder what that means—and the other— We'll be Mr. and Mrs. Lester Cranston, Jim, of Winoha, Idaho. And we were going to leave New York tonight but saw their sign. We'll love everything about their scheme—"

She started across the street; and Pendrake tagging along behind, reached the door with her before, in a single flash, his senses snapped back into position. In one comprehensive leap of mind he saw that it was his own emotional desire to see her that had brought her here.

"Eleanor," he said tensely, "we're not going in."

He should have known it would be useless to speak. Inside, he followed her with reluctant steps to a girl who sat at a spacious plastic desk in the center of the room. He was seated, before the glitter sign at the edge of the desk caught his eye:

Miss Grayson

Miss— What! Pendrake writhed in his chair, and then a vast uneasiness held him steady. Dr. Grayson's daughter! So the scientist's family was mixed up in this. It was even possible that two of the four men who had taken the plane from him had been his sons. And perhaps Lambton had some sons. He couldn't remember what the *Encyclopedia* had said about the children of Lambton.

In the intensity of his thoughts he was only dimly aware of the conversation between Eleanor and Grayson's daughter. But when Eleanor stood up he remembered that the talk had been of a psychological test in the back room.

Pendrake watched Eleanor walk across to the door that led to the second tower, and he was glad when, after about three minutes, Miss Grayson said:

"Will you go in now, Mr. Cranston?"

The door opened into a narrow corridor, and there was another door at the end of it. As his fingers touched the knob of the second door, a net fell over him and drew taut.

Simultaneously, a slot opened to his right. Dr. Grayson, a syringe in his fingers, reached through, pushed the needle into his right arm above the elbow; and then called over his shoulder to somebody out of sight:

"This is the last one, Peter. We can leave as soon as it gets dark."

The slot clicked shut.

Pendrake squirmed horribly; he fought there under that dim ceiling of light, striking against the net that held him. And every instant the terror grew, the terror that was in him, not for himself, but for Eleanor—Eleanor, who had gone through this door minutes before—

He would have cried out, but his rage was too great, his fear for her too near insanity. Eleanor, who had no artificial arm to take the shock of the dope from the syringe, and who—

He stopped the mad flame of thought by an effort so violent that his whole being shook. He must pretend to have succumbed. Only thus could he avoid another syringe that might be more accurately aimed at a vital spot.

As he let himself slump, a voice said:

"That fellow fought too hard. You'll have to increase the dose for these powerful-looking men."

The words were Pendrake's first knowledge that his struggle had been observed. He let himself slump farther, and after a moment realized that the net was moving, lifting. A door opened in the ceiling and brightness pressed against his eyelids.

"Lay him down here beside his wife."

His body touched a softness that seemed to yield endlessly like a bottomless cushion; the net writhed and wriggled from under him; and suddenly it was gone.

The young man's voice said: "Look at this, he's severed four of the net strands. I thought this plastiwire was unbreakable."

The older man's voice came from a greater distance: "Strength is a curious quality. A dog can strain at a leash till it rots—or break it the first day if he lunges against it with enough snap. It—"

The scientist's voice faded curiously, as if he had gone into another room and closed the door.

Gradually, as Pendrake lay there, he grew aware of breathing around him, the slow, measured breathing of many people.

The sound, with all its implications of human beings still alive, eased the dreadful tightness in his throat. He slitted his eyes and saw that he was in a round metal room filled with scores of enormous hammocks that were suspended by cords attached both to the metal floor and the metal ceiling.

Twice, Pendrake slid his leg over with the intention of dropping to the floor. But each time a vague snatch of sound made him sink back and slow his breath into rhythm with that of the others.

He was preparing for his third effort when his body was struck a sharp, all-over blow. Beneath him the hammock sagged at least two feet, and there was an awful emptiness inside him, like the nausea of sustained hunger.

It was like that for a very long time, and actually there was no change in the fact. But his body grew accustomed to the relentless pressure. Finally, puzzled, he slid out of the voluminous folds of his hammock and dropped to the floor.

He fell hard. The violence of it strained his muscles, and there was a pressing weight on him that stunned because it was beyond all his experience, and because—he recognized it.

Acceleration! Fantastic, unimaginably great acceleration! He must be in a ship. That damnable second tower had contained a ship powered by atomic engines.

But what kind of a ship? What—

The thought faded as, with a blank will, he scrambled to his feet. There was a stairway leading to a closed door. But the door opened at his touch.

One lightning glance revealed the room was empty of human beings. There was a window that showed a black sky punctuated with stars, and in the room itself, mounted on rigid metal bars, eight engines were spinning.

For a moment, to his tensed mind, to his body concentrated on possible, stupendous danger, the scene seemed normal enough.

Engines; the number didn't matter. If one existed, so could eight; and their unlimited power could surely raise a ship out of a hundred-and-fifty-foot turret, though the speed of that rise in the night had been unnatural. Still, eight of those engines spinning—

The normalness shattered. Pendrake sent a glance wild with surmise at the engines. *The engines spinning* on rigid shafts and it should be the shafts that spun, not—

His memory flung back to the night in his stable when the engine had lifted with strange buoyancy from the floor, spun slowly and— How could he have missed the significance? How *could* he?

With a hissing intake of his breath he ran to the window. But the knowledge of what he would find was already in him. For a long moment he shivered with the physical daze of seeing interplanetary space, and then he drew his body and mind into closer union and was himself.

He reached the room where Dr. Grayson and the young man were lying in their hammocks. The latter he dealt one stunning blow—and tied them both with cords from their hammocks, tied them into their hammocks, wrapping the cords around and around.

There was silence in the control room. His mind felt far away, cold, joyless. His victory seemed somehow lacking. He couldn't quite place the missing factor, but perhaps it was the stunned expressions of the two prisoners.

Uncertain, Pendrake studied the small instrument board; he thought finally: "That note I found in Dr. Grayson's study. All I've got to do is reduce the r.p.m. of the engines to less than five hundred; the pressure will gradually shift toward a line vertical to the axial plane and the spaceship will turn in a great circle and head back toward Earth."

But first— He glanced at the men and then he walked slowly to an ex-

YOU'RE SMOOTH ENOUGH IN A BLACKOUT!
YES, IN DAYLIGHT TOO. I USE STAR BLADES!
6NX PROCESS
STAR
DOUBLE EDGE
4 for 10¢
STAR
SINGLE EDGE

panse of transparent aerogel, and stood staring out into the velvet, light-sprinkled night.

The sun was a ghastly, flaring shape to his left. Pendrake said, without looking at the men:

"Where are you going? Mars, Venus the Moon, or—"

He stopped. He couldn't help it. Mars, Venus— He felt dizzy, then electrified. The wonders of the skies! The only divine cognomens that would survive all the ages of religion!

"Which one?" Pendrake gasped. "Which planet?"

"Venus!"

The answer sighed from the older man.

"We have a colony there. Quite a large one now. A ship with a hundred people leaves from one of our centers every three days—and there have been children."

Pendrake said sternly: "A hundred people kidnaped from Earth every three days—doped." He choked a little.

"Denilin sleep drug!" said Grayson. "Harmless, quick, no after effects. It saves simple people from their terror of something new like space. When they get to Venus they don't mind—

"The planet is smaller, you know, than has been thought, not more than six thousand five hundred miles, more clouds high up, none below. But the brightness of the sun comes through—without the heat; and all the glories of Earth cannot compare with the treasure land that is Venus. No, they don't mind when they see— You must be Pendrake—that stiff right arm— We wondered whe—"

"Doped!" repeated Pendrake.

But the miasm of his fears was fading. There was greater uncertainty in his voice as he said:

"But why the secrecy? This great invention! Properly exploited it would be—"

"It would ruin everything!" It was the young man, his tone desperate. "Pendrake, we're not criminals. There are seventeen famous scientists and their families in this—the greatest names in atomic science. They decided in 1944 when the engine was invented, when the war was already won, that the planets should not inherit the bitterness of Earth. Don't you see, a scramble for territory would be hell?

"Our plan is to establish the nucleus of a new nation, modeled after the United States; and every person who immigrates becomes—a Venusian."

It was several hours later that the spaceship landed on a darkened lot. Pendrake and Eleanor climbed to the ground and stood silently watching the torpedo-shaped spaceship merge with the clouded night sky.

The letter came to the big white house a week later:

> Air Commissioner Blakeley has noted the names of the scientists you submitted, but feels that further correspondence with you would be fruitless.

Pendrake grinned at his wife. "Now, everybody's satisfied. I *had* to report it, of course, but"—his expression grew more thoughtful—"it is hard to believe the planets will have their chance because I tossed a loud-mouthed fool out on his ear one August afternoon."

THE END.

The World Of 61 Cygni C

by R. S. Richardson

An article on the most important astronomical discovery of many years, a discovery that will force a complete revision of both philosophical and astrophysical concepts of cosmology—the discovery of a planet of a sun other than our own!

Illustrated by Richardson

Science-fiction owes the double-star men plenty.

On the surface, few astronomers do work that seems so devoid of the spectacular. The fact that U Sagitarii has a kink in the contour of its hydrogen lines at minimum light is not likely to arouse the same popular response as an announcement to the effect that the southern hemisphere of Mars is threatened with an ice age.

Yet these men, working quietly by themselves, have uncovered truths so incredible that at first they have hesitated to believe the results of their own analysis. Discovery of Sirius B, the first white dwarf star, is a notable example. Who would ever have dreamed that somewhere in the Universe there is matter with a specific gravity of forty thousand? The recent report that one component of RW Tauri is surrounded by a scarlet Saturnian ring of glowing hydrogen is another.

Now has come the biggest announcement of all from this field. One which will not be included among the ten biggest news stories of the year, although it has within it scientific and philosophic implications that will be fervently discussed long after today's headlines are forgotten.

DEFINITE EVIDENCE HAS BEEN FOUND FOR THE EXISTENCE OF A PLANET IN THE SYSTEM OF 61 CYGNI C.

What is more, there are reasons for believing it may be a new *kind* of planet, one of a different degree or higher order from the familiar stones of our own system. A sort of gray dwarf, as it were.

But that is anticipating a bit. Perhaps before describing the body itself it would be wise to take a look behind the scenes at some of the events leading up to its discovery. To get what the interviewers are so fond of quizzing you about these days—the "background," in other words.

To understand why the discovery of an interstellar planet was so long in coming it is necessary first to know something about double-star astronomers themselves and the way their work is carried on. The study of visual binaries in particular is singularly barren of definite results in that practically all the time is devoted to the tooling-up process and very little to turning out the finished product. For this reason, one prediction regarding interstellar planets can be made with considerable assurance. To detect them will always be a long, tedious job. 61 Cygni C may be the sole representative of its class for many years to come.

The investigation of visual double stars has never attracted a large number of disciples, especially after about 1905, when the spectrograph began its rise to power. The old binary men undoubtedly resented the intrusion of this lusty infant into astronomy, and their subsequent relegation to a back seat. A significant story in this connection is told of Burnham, one of the most famous of the double-star observers, whose ability to separate close pairs under moderate aperture was simply uncanny. Apparently his sole experience in spectroscopy consisted of a visit to the laboratory of a renowned astrophysicist, who gave him a look at the two powerful lines in the yellow produced by incandescent sodium vapor, used in the flame test for this element. On being asked about it later, Burnham's only comment was that "he showed me the soda lines—but I didn't think much of them." *

Like Burnham, who was originally a court stenographer, many of the early double-star astronomers were amateurs who carried on the exacting work with relatively small instruments, often under unfavorable circumstances. Although few large observatories, such as Lick, Yerkes, Sproul, and others, have engaged in vigorous double-star programs, others have neglected it almost entirely. So far as the writer is aware, no direct visual measurements on visual double stars has ever been made at Mount Wilson, which has never even possessed a good micrometer. Measurements with the interferometer on the double star, Capella, have been made with the 100-inch, however.

The great bulk of double-star observations recorded in the catalogues is based on visual micrometric measurement of the direction of the fainter component (B) of the pair from the brighter component (A). The micrometer fits onto the end of the telescope in place of the regular eyepiece. Looking in, you see objects just the same as before except that there are two parallel spiber-web lines extending across the field of view faintly illuminated by an electric light from the side. One spider line is fixed and the other movable back and forth with respect to it. The whole assembly can be rotated around the axis of the telescope so that the two lines may be oriented in any position desired. With the micrometer you can measure not only double stars, but also the length of shadows on the Moon, the diameter of Mars, the position of a comet; in short, any small angle in the sky that you think needs accurate determination.

A large micrometer is a masterpiece of the machinist's art and often worth several thousand dollars. To hold it solidly in position it is fitted into a heavy adaptor, which screws into the telescope tube. In the case of the 36-inch refractor of the Lick Observatory, the adaptor is a massive casting that is about the limit one man can handle who is not a professional wrestler. Of course, the micrometer is only on the telescope part of the time, since such a large instrument will be employed for a variety of different purposes.

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*I have been unable to discover the name of the astrophysicist, but older astronomers have assured me of the authenticity of this Burnham story.

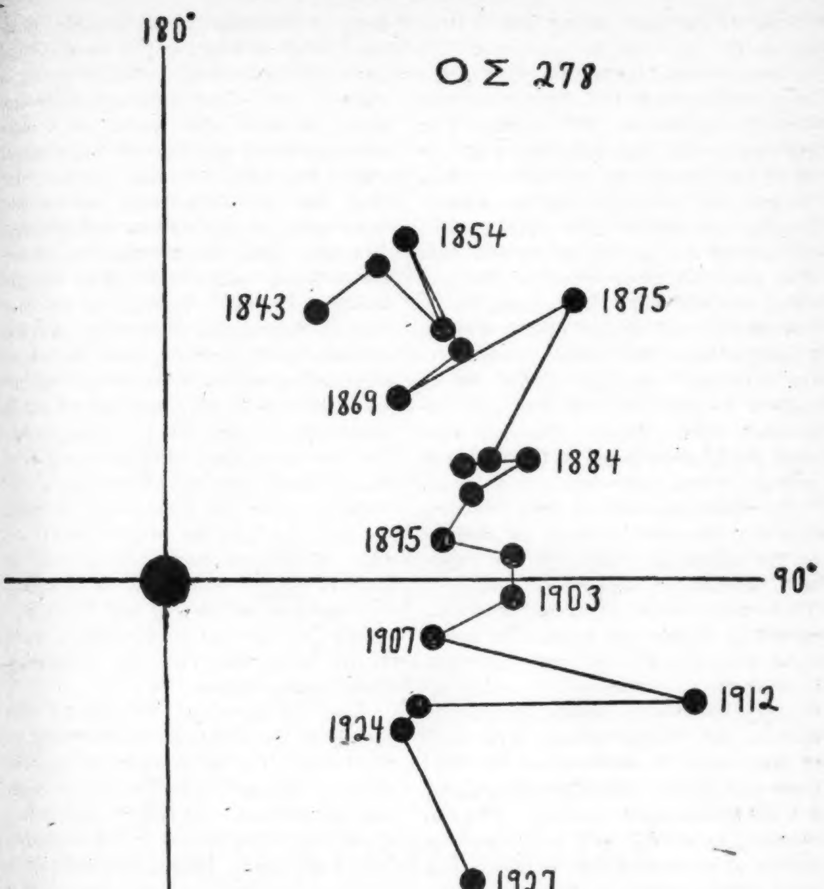


FIGURE I.

The double star system of OE 278 showing the direction and distance of B with respect to A according to the best measures of experts made during the last one hundred years.

The wide scatter in the points illustrates the difficulty of detecting minute irregularities in the motion such as would be produced by disturbing effect of small invisible component C.

One of the most trying jobs a newcomer at Lick had to learn was how to remove the three-prism spectrograph from the 36-inch and replace it with the micrometer, or vice versa. The operation was not only awkward in itself but there was always the extra hazard that while the change was in progress the 60-foot tube would get out of balance and go into a sudden nose dive with disastrous effect on the precious 36-inch lens. The great E. E. Barnard is said to have gone through this agonizing experience. Fortunately the telescope was not wildly out of control so that the objective end descended rather slowly. Barnard softened the blow by lying on the floor and letting the lens come down on his back.

To make micrometer measurements that the observer feels are satisfactory on the following morning is more difficult than might at first be supposed. There are three principal operations involved in double-star work. To determine the direction of one star from another the telescope is first unclamped in right ascension, which disconnects it from the driving clock. The stars at once begin to drift across the field from east to west, which serves to define a fixed direction in the sky. The micrometer is turned until a star follows closely along one of the threads. The angle corresponding to this orientation of the micrometer is then noted. Next the telescope is reclamped and the micrometer turned until one of the threads passes through the two stars. The angle between this position and the east-west position previously found gives the direction or position angle (P. A.) of one star, usually the fainter (B), from the other. Their separation is measured by turning the micrometer through a right angle, putting the fixed thread on one star and bisecting the other with the movable thread.

This is easy to tell, but the process is apt to be a nerve-racking one, especially for a beginner. One of the first essentials is to make all measurements from a thoroughly comfortable position. Failure to grasp this fundamental rule has undoubtedly spoiled many a night's run. The measurements are generally taken while seated on a platform made of a series of steps about twelve feet high. Anxious to be under way, the novice carelessly selects one from which he can see into the eyepiece. But after about twenty minutes he becomes aware that something is vaguely wrong. Instead of obtaining an easy view of the stars he finds either that his movements are growing more and more cramped or the eyepiece is soaring out of reach. For, since the clockwork is continually turning the telescope to follow the stars, the end of the long tube is gradually rammed down onto the astronomer or else lifted over his head. At first he tries to proceed as if all were well. But eventually he will be forced to halt and make a complete readjustment of himself and his accessories just as the preliminaries were nearly over and the real measuring about to commence.

Then he has always to contend with seeing or the atmospheric trembling of the image. On some nights it may be next to impossible to fix a star with the spider lines. As fast as one is impaled upon a thread it immediately jumps off again. In Seeing Condition 1 or less-than-1 star images appear to dissolve, explode, or swell into huge, fuzzy cotton balls. Veterans seldom fight bad seeing, but rigorously restrict observations to nights when the air is exceptionally calm. Piling up large numbers of misleading results may look industrious but is only making trouble for astronomers as yet unborn.

The worst blow that can happen to a nice run of measurements is for one of the threads to break. Astronomers who use the micrometer regularly keep a cocoon of spider webs on hand for these emergencies. Replacing the airy filament is a delicate task even for those with the necessary patience and a steady hand. With good luck an expert can string one and be back at the telescope within an hour. But it is one job where you positively can't whistle while you work!

Above everything else, micrometer measurements must never be made in haste or hurried in the least degree. The observer should be in a tranquil state of mind, and the settings made with cool deliberation. (It is possible that Asaph Hall hurried a little the night he discovered Deimos and was trying desperately to get a fix on it before the elusive satellite was covered up by fog from the Potomac).

What is the net result of all this painstaking labor?

Merely the hope that years later your observations when combined with dozens of others may assist in establishing the orbits of a few binary systems. Such observations are of fundamental astronomical importance since they constitute our only direct means of determining stellar masses. But the average visual binary has a period of around fifty years, and some are one thousand years or more. Often a wide pair must be under observation for a century before a guess can be made at its orbit. And by that time someone may have

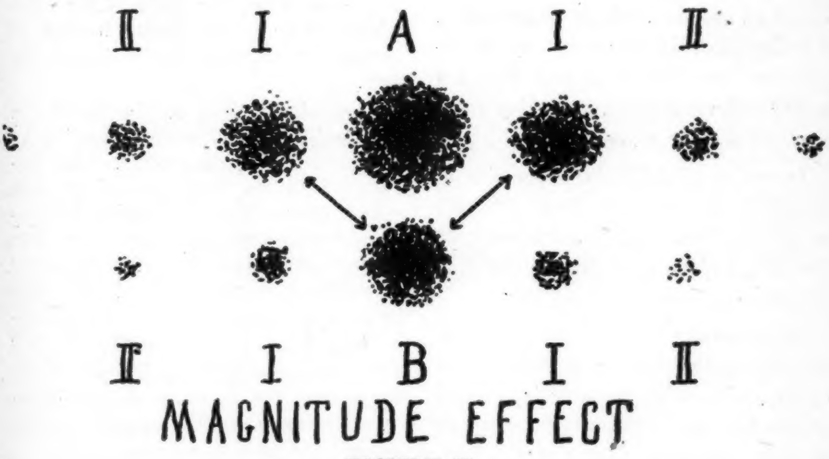


FIGURE II.

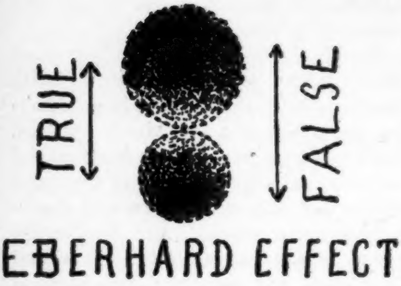
THE THREE GREMLINS OF DOUBLE-STAR PHOTOGRAHY

I. MAGNITUDE EFFECT. In most double-star systems the A component is so much brighter than B that the images on the plates differ greatly in size. This will cause errors in their position when measured.

To remedy this defect, a coarse grating made of metal strips is placed in front of the telescope objective. It's effect is such that each star, instead of appearing on the plate as a separate image now appears as a series of images, of which the brightest is at the center, with successively fainter images extending from it in opposite directions.

In the diagram, the central bright image of B may now be compared with the fainter images marked I on either side of central image of A, which are nearly equal in area.

Images are represented somewhat as the silver grains appear under high-power magnification.



II. EBERHARD EFFECT. When two images are close together on the plate, the developer has to do more work in reducing the silver halide on inner edges of images than on outer edges. The developer is thus weakened in region between images so that they are not of uniform density, appearing darkest toward outer edges.

In trying to determine separation of A and B, the measurer would probably set the cross-hairs of his micrometer on the region of greatest density and thus get too large a value.

Only remedy is to avoid close pairs. By limiting the program to double stars of wide separation, the resulting images on the plate are sufficiently far apart so that the Eberhard effect is absent.

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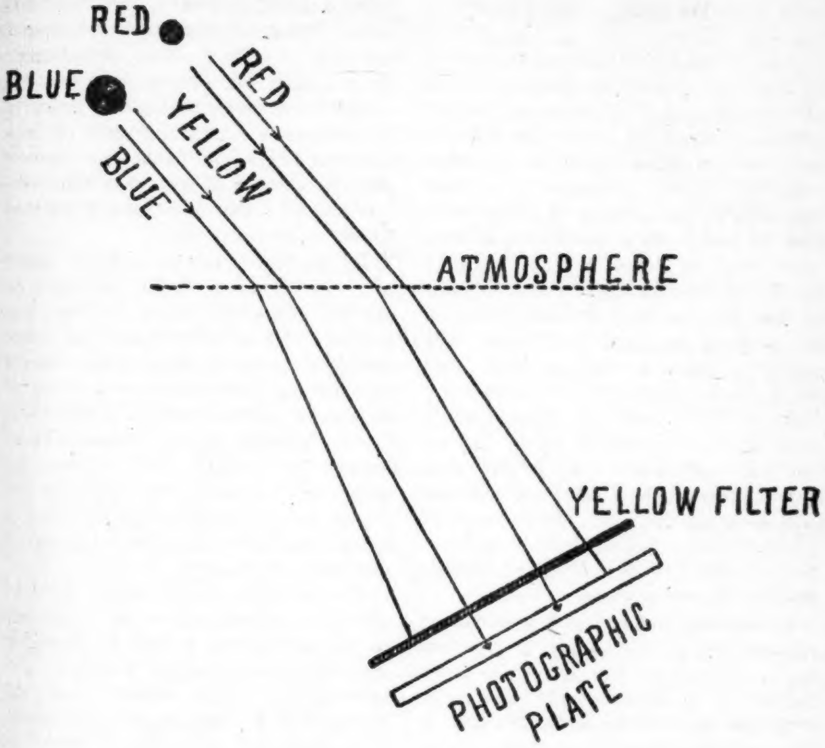
originated a new technique that will render all measurements prior to 1950 hopelessly obsolete, just as those of Meyer and Bradley are considered too crude today for use in orbit determinations.

Figure I shows some positions of the system of O E 278 listed in the present standard authority, Aitken's "General Catalogue of Double Stars Within 121° of the North Pole," published in 1932. Therein may be found a list of the best measures that a series of experts could do on this pair. Yet the points are so scattered that it is impossible to draw a smooth curve through them! And this star has been under exceptionally close scrutiny for a century. For hundreds of others like it, not a semblance of elliptical motion can be recognized. If we are unable to trace the orbit of B with respect to A, how then can we expect to distinguish tiny sinuosities in the motion of B caused by an invisible companion C?

Taking more observations is not likely to help much. There are plenty of dots on the diagram already. What is needed is *more better* observations—observations with so little scatter that they soon define the shape of the orbit within very narrow limits instead of letting it wander aimlessly around the axis.

Such observations can be had for a few double stars of wide separation by application of photography. An accuracy fully ten times that of the best visual observations is attainable provided certain precautions are taken. The photographic method was thoroughly investigated and applied to double stars by the Danish astronomer, Ejner Hertsprung, from 1914 to 1918, but has never been widely used. The technique is exacting, but no more so than is required in much routine photometry done every night in some observatories.

One glimpse of a double star through a telescope should be sufficient to tell any amateur camera fan where the trouble is coming in photography. In most systems one component is from two to ten times brighter than the other. Now on the largest scale astronomical photographs the two-star images will not be more than one thirty-second of an inch apart. Which means that if the exposure is timed correctly to get the bright star the weak one may fail to show at all. Or if timed for the weak star the bright one will spread over the plate and blot its companion out completely. Unless the difference in brightness is less than half a magnitude, seri-



III. COLOR EFFECT. Although both components emit light of *all colors,* *since B is a cool star and A very hot, B will emit relatively more red light than A.*

Red light is bent less by the atmosphere than blue. As a consequence, the stars would be slightly separated by atmospheric dispersion if the images on the plate were formed by the most effective light that they emit.

This error is avoided by using the same color from both stars, yellow being the most convenient color. A yellow filter in front of the plate cuts out blue rays, but allows yellow and red to pass. But using a photographic emulsion which is sensitive chiefly to yellow eliminates most of the red.

ous errors are almost sure to result later when the plates are measured.

This gremlin of *Magnitude Difference* is the most formidable encountered in the photography of double stars. It cannot be overcome by any of the schemes used in the same situation on other celestial objects. Suppose a parallax man desires the position of Sirius relative to small stars nearby so distant they may be considered as virtually fixed. He adjusts a little sector in front of the plate so that it falls just over the position occupied by Sirius. The sector is opened at such an angle, that when started rotating it will reduce the light of Sirius until it is approximately equal to the background stars. But no one can adjust a sector so skillfully that it will obstruct the light from one star and miss another one thirty-second of an inch away. Neither is any combination of filters or neutral tinted wedges suitable to the purpose.

Hertsprung cracked the problem by approaching it from quite a different angle. Remember how the Moon looks through a screen window? The mesh of wires spreads the light out into a cross with the Moon at the center. You can get somewhat the same effect by gazing at a light through your eyelashes. If one set of wires were removed from the screen, only a single streak would be visible. The screen acts as a rough form of diffraction grating, one of the most powerful devices in astronomy for producing the spectrum of a star. A good grating consists of a piece of glass upon which has been ruled thousands of lines to the inch. They are invisible to the eye, but under a compound microscope the surface is found to be furrowed with wavy grooves resembling a field plowed by a farmer who was slightly intoxicated at the time.

Let a beam of sunlight shine through the grating onto the wall. There will appear a bright spot of white light somewhat as you might anticipate. But in addition, extending from the white spot in opposite directions, is a series of colored bands or spectra. The two first-order spectra adjacent to the white spot are the brightest, the second-order spectra much fainter, the third order is scarcely discernible. It is this property of a screen for breaking light up into a central bright spot flanked on opposite sides by a series of spectra of diminishing intensity that Hertsprung adapted to his double-star work.

By putting a screen of metal strips over the objective of his telescope, he got the effect of a coarse transmission grating. For each individual star image that had appeared on the plate without the grating, there was now a string of images of different sizes diminishing from a central largest image. These images were really star *spectra,* but because the grating was so coarse the colors were crowded together into a small round spot instead of being spread out into a band.

The intensity of the images could be altered to correspond to the brightness of the components merely by changing the width of the strips and their distance apart. Now doubles could be photographed regardless of magnitude difference and still images could be found on the plate of nearly equal size. Imagine star A to be four times brighter than B (Figure II). On the photograph there will be a series of images of both stars side by side. But it will be seen that the central bright spot in the diffraction pattern of B is about the same size as the two first-order spectra of A. And these three images are the ones that will be measured—not the the real direct images of the stars themselves.

Eliminating the magnitude effect by no means disposes of all the gremlins involved. Those whose experience with the photochemical effect of light is limited to snapping grandma and grandpa in the back yard with a No. 2 Brownie have no conception of how carefully astronomers examine their star images

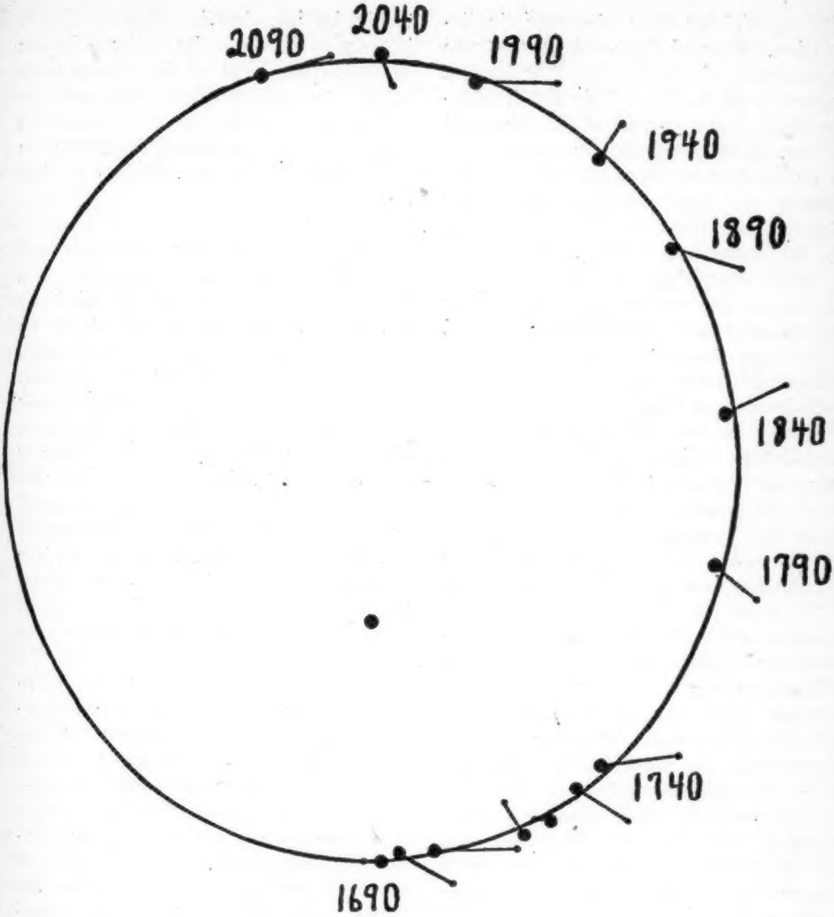


FIGURE III.

How the system of 61 Cygni C would look if viewed from "above," or so that the motion is counterclockwise. Owing to tilt of orbit with respect to the line joining it to the Earth. this is not the way it actually looks in the sky.

The distance of C from B and the mass of C has been much exaggerated in order to make the disturbing effect of C on B readily apparent. The orbit here marks the path of the center of mass of B and C. The two swing about the line joining them as if the point where it crosses the curve were the fulcrum of a weightless rod.

for the slightest trace of systematic distortion. One of the most troublesome and erratic of the gremlins that operate upon the plate after it is in the developing bath is the gremlin of the Eberhard effect. Briefly stated, how energetically the developer builds up the silver grains into a star image depends upon how much other work there is to be done in the immediate vicinity. If there is another star image nearby, the action is not so vigorous owing to weakening of the developer over this spot. Hence, when two images are nearly touching, the development on the sides adjacent will be weaker than on the outer edges. For this reason, the adjacent edges of double-star images are likely to be abnormally weak; and, as a consequence, may be measured as if farther apart than they really are.

The safest way to avoid errors due to Eberhard effect is by not having any. The principle involved is somewhat similar to the one in etiquette that forbids serving corn on the cob at a formal dinner. Since the Eberhard effect is serious only for close double-stars, therefore close double-stars are not photographed. As noted in the beginning, this necessarily restricts the program to a comparatively small number of slow-moving, wide doubles. The close pairs of short period which are the more interesting still are the exclusive property of the visual observers.

But one other error remains and it is not serious. The atmosphere acts like a prism upon light rays entering it from the vacuum of outer space. The red rays are bent the least and the violet rays the most. Often double stars show striking differences in color. For example, Antares is red and green; Albireo is orange and blue, et cetera.

It may seem incredible that two sources of light as close together as the components of a double star—about ten inches of arc—could be appreciably spread apart owing to atmospheric dispersion. However, Hertsprung found that if it were neglected, sensible errors would be introduced. Fortunately, it is easy to eliminate by using only the same narrow band of light from both stars. A yellow filter cuts out the violet, and a photographic emulsion which has its maximum sensitivity in the yellow is scarcely affected by the red.

After an astronomer has measured the position angle and separation of a binary with the micrometer, he can close up the dome and go to bed, secure in the knowledge that he has taken care of 48 Virginis or Sh 363 for the next five years. Not so with photographic observations. Work has scarcely begun after the telescopic part is over. Dozens or scores of exposures are taken on one plate and only those caught during good seeing that show sharply defined images are checked for measurement. In the case of 61 Cygni C, Dr. Strand alone took five hundred plates with the 24-inch refractor of the Sproul Observatory at Swarthmore College, Pennsylvania. To determine the positions of the components with the measuring machine required a quarter of a million settings on the star images. But the results so laboriously obtained are fully ten times more accurate than five-year averages of the best visual observations as indicated by the virtually complete absence of scatter among the points. Also, the plates constitute a permanent astronomical record that may be stored away and steadily increase in value with age.

No better example could be found to illustrate this fact than the case of 61 Cygni C itself. Dr. Strand's own photographs covered merely the interval from 1938 to 1942, which is much too short to determine the orbit of a double star with a period estimated at seven hundred years. Although plenty of micrometer measures were available going back to those of Bradley in 1753, close examination revealed that all but a few were affected by serious *systematic* errors. Now systematic errors are among the very worst that may af-

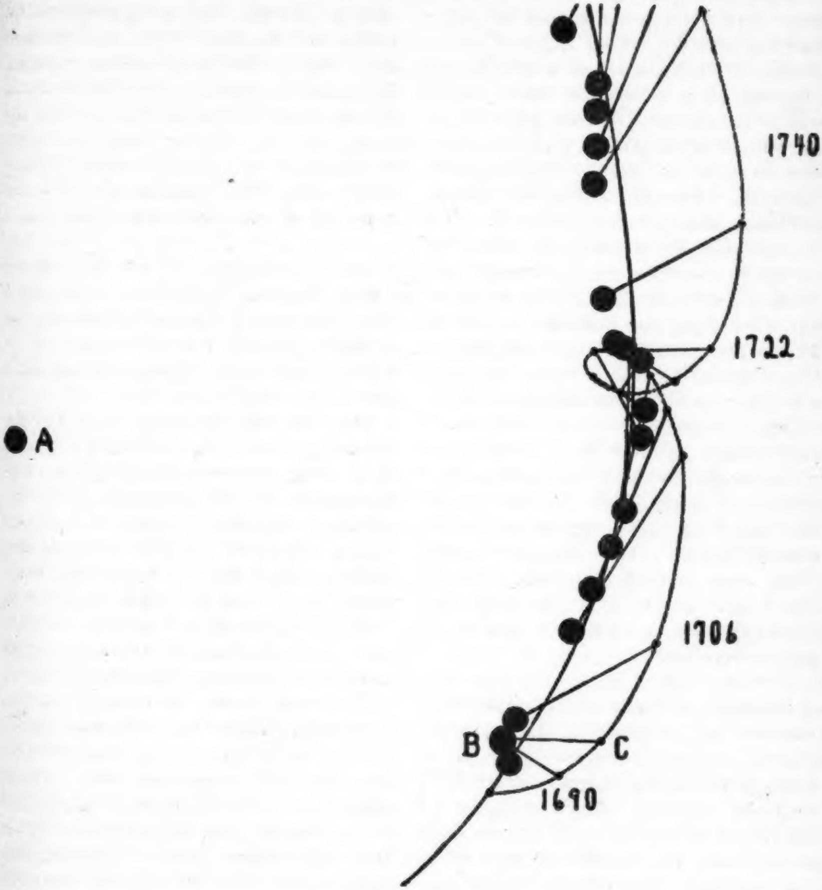


FIGURE IV.

Section of the orbit of 61 Cygni C from 1690 to 1740 much enlarged to show detailed motion in the system.

The Star B and invisible companion, C, revolve around their center of gravity shown by the continuous line. Because of its smaller mass, C does most of the moving.

In addition, both B and C revolve around A.

The presence of C is inferred from small deviations from smooth curve shown by B. From the known mass of B and the magnitude of the deviations, the mass of C can be calculated.

fect physical observations. For, unlike accidental errors, they cannot be eliminated simply by taking a lot of them. Atmospheric refraction is a well-known example of a systematic error which makes all stars appear too high in the sky; there is no tendency of refraction ever to displace a star downward. Here, however, the nature of the error is understood and can be corrected. But it might happen that a systematic error is present and be quite unsuspected. Thus if the clock used to time an interval were slow, the intervals would all be too short, but no one would be the wiser unless the clock were compared with at least two other standard clocks.

The physical and mental condition of the observer can also have an insidious influence on his work. An astronomer chronically troubled with stomach ulcers who has developed a narrow pessimistic outlook on life might measure everything three percent too small. On the other hand, one with fine digestion and cheerful disposition could err in the opposite direction.

By the rarest of good luck, however, it happened that one of the pioneers in astronomical photography, Lewis Rutherford, of New York City, had taken nineteen plates of 61 Cygni C from 1870 to 1874 with the 13-inch refractor of his private observatory. This was back in the days of the wet process when the emulsion had to be coated on the glass and exposed before the plate had time to dry. These plates had been preserved at Columbia University and were kindly placed at Dr. Strand's disposal for measurement. Despite the methods then in use, he found the emulsion to be remarkably fine-grained and the images very good. (This is also true of Rowland's photographs of the solar spectrum taken in 1890 with the powerful concave diffraction grating at Johns Hopkins). Because Rutherford's plates could be measured and reduced by essentially the same methods used on the modern material, the interval covered by photography was extended back for over seventy years. In addition, Hertsprung himself had photographed 61 Cygni C with the fractor at Postdam from 1914 to 1918 when he was engaged in his classic researches on double stars. These plates when combined with the most reliable of the visual results yielded positions of 61 Cygni C practically free from systematic errors for a period of one hundred and ten years.

Aitken, writing of 61 Cygni C in his "New General Catalogue," remarked that "the observed arc is, of course, too small to permit the derivation of an orbit of any value, though several have been computed."

But he was speaking only of the micrometer work. Now that the tenfold more accurate photographic positions could be brought to bear on the problem the whole situation was altered. Yet, even so, their analysis and interpretation was by no means easy. Over thirty different orbits were tested with periods ranging from five hundred fifty to eleven hundred years before an entirely satisfactory solution was found.

And now comes the exciting part of the story. After an orbit was finally found that fit the observations so closely that the plot resembled beads strung upon a wire, small, wavy irregularities still remained that no amount of figuring could explain away. The question was: Are these real deviations from the orbit arising from the disturbing effect of an invisible component or merely the last traces of some systematic error still only partially eliminated? As late as January, 1942, Dr. Strand could not be sure. "There has been some speculation on the presence of a third component giving rise to perturbations in the orbital motion. In spite of their much higher accuracy, the photographic plates taken by Hertzsprung and the writer have not shown any sign of perturbation so far."

Nevertheless, the star was kept on the observing program of the Sproul Observatory as it was believed that six plates per year should be sufficient to detect the presence of a satellite revolving around one of the components even if its mass were no more than six times that of Jupiter. With the result that at the close of the year Dr. Strand was able to announce:

"The perturbations thus revealed by the photographic observations show that the System besides its two visible components has a third member which we cannot see, but whose presence is revealed by its gravitational attraction upon one of the visible components as it travels around it. The only solution which will satisfy the observed motions gives the remarkably small mass of sixteen times Jupiter's for the third member. We have reason to believe a celestial body with such small mass must have such extremely low luminosity that we may consider it a planet rather than a star. THIS WOULD MEAN THAT WE HAVE FOUND THE FIRST CASE OF PLANETARY MOTION OUTSIDE OUR SOLAR SYSTEM."

The capitals are the writer's.

Any lingering doubts as to the planetary nature of 61 Cygni C can be effectively squashed by the following line of reasoning.

The calculation of the orbit of 61 Cygni C together with its parallax, which is one of the best determined in the whole heavens, enables the total mass of the System to be found with great precision. It is 1.120—just a trifle more than that of the Sun itself, which is always taken as the unit of mass.

Also the mass of C can be derived separately from its perturbations on B. It comes out 0.016, or equal to 16 Jupiters. Which leaves 1.104 for the mass of A and B together.

The individual masses of A and B are rather uncertain, but if we suppose them to be equal and split the difference, we get a value of 0.552 apiece. Fortunately we can get an independent check on this result from Eddington's Mass-Luminosity relation. Both stars are red dwarfs of low luminosity, being seven percent and four percent of the Sun. (Strictly speaking, there is no A or B component in the system of 61 Cygni C. Which one is designated the A component is purely arbitrary.) For such feebly radiating bodies Eddington's curve predicts masses of 0.55 and 0.58, agreeing very closely with the 0.552 obtained above.

Very well.

Suppose someone raises the objection that the observed irregularities do not necessarily imply the existence of a planetary object at all. Instead, what we see is in reality the motion of the *effective center of light* of two close luminous bodies revolving around on another. There is thus no need to invoke the presence of a dark body which, it must be admitted, is opposed to previous observations.

But such an argument can be immediately refuted on the basis of the total

"THAT'S FOR ME
FOR ENERGY"
BETTER TASTE...
PEPSI-COLA
BIGGER DRINK

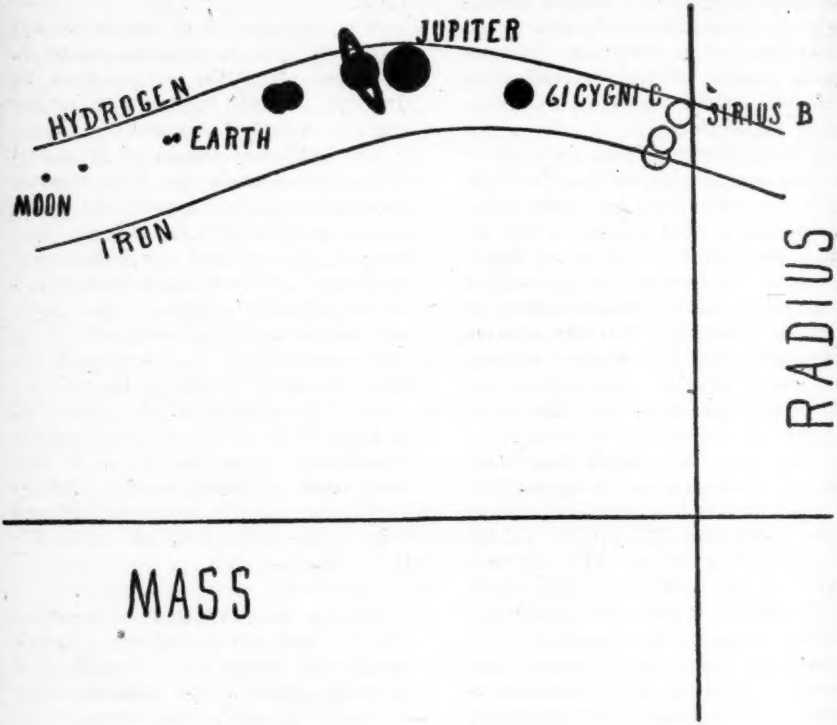


FIGURE V.

According to recent investigation into planetary constitution by East Indian physicists, planets are regarded as non-radiating "black dwarfs," for which an increase in mass corresponds to an increase in size. High density "white dwarfs" are stars for which an increase in mass corresponds to a decrease in size—up to a mass of about 1.4 suns, at least.

In between is region which marks ceiling on sizes of planets. Since Jupiter falls at about this position on the curve, according to this theory he is the largest cold body or "stone" possible.

But 61 Cygni C, with a mass of fifteen Jupiters, is intermediate with respect to ordinary planets and "white dwarfs," a sort of hybrid or "gray dwarf."

mass of the system. For there is absolutely no room left for a third *luminous* body. To introduce any kind of star sufficiently bright to create the effect desired would call for a mass of at least 0.4. But then the total mass would be 1.50 instead of 1.120. And a mass of 1.50 is much larger than the dynamical results can possibly allow. Hence, we are forced back to the original conclusion of a dark object of planetary dimensions.

Now as to the planet itself. How does it compare with the planets of our own system? Can we make any predictions whatever as to the kind of conditions we might encounter on 61 Cygni C?

Here are the facts together with a few fancies concerning this new world.

First of all, it is situated in one of the ten nearest systems to the sun. The latest parallax puts 61 Cygni C at a distance of 11.1 light years.

As noted already, the pair has no distinct primary and secondary. Both components are red dwarfs with surface temperatures of about 3000° C, instead of 6000° C like the Sun. It is not even known to which component C owes allegiance. This may seem strange at first until we remember that the position of one star with respect to the other is purely relative. It really doesn't make a particle of difference which star is regarded as fixed and which one does the moving so long as everyone agrees on the matter. If A and B were interchanged, the perturbations would still be there as distinctly as before.

The orbit of C around the star tabbed for convenience as B is an elongated oval with the almost cometary eccentricity of 0.7. At perihelion it comes within sixty-seven million miles of its little red dwarf sun or about the distance of Venus from Sol. At aphelion it recedes to three hundred seventy-nine million miles or a little over midway between Mars and Jupiter. (Figures III and IV).

These large variations in distance are bound to create great extremes in temperature judged by terrestrial standards. Since we know nothing about the atmosphere of C, if any, we can likewise know very little about its surface temperature. However, we can calculate the maximum temperature a black body such as a meteor could reach at these distances from a red dwarf. At perihelion the highest temperature at noon on the equator would be —30° C and at aphelion —170° C. In the Solar System this corresponds roughly to the temperatures of Jupiter and Uranus.

The perturbations tell us the mass of C but give no information as to its size. We can make a guess, however, by assuming it to have a density equal to the average of Jupiter and Saturn, which happens to be exactly that of water. This would give it a radius of

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seventy-three thousand miles, or nearly twice that of Jupiter.

But right here comes what may ultimately prove to be the most significant result of the discovery of this new massive planet. There are theoretical reasons for doubting whether a "stone" with a mass of 15 J can be so big; whether, indeed, it may not be considerably smaller. For it is possible that 61 Cygni C may be the first example of a higher order of planet. One in which the difference is not merely one of degree but of *kind*.

Recent considerations emanating from the theory of extremely condensed or *degenerate* matter such as white dwarfs are composed points to the conclusion there must be a ceiling, so to speak, on the size of planets. It would be supposed, naturally, that in going from a less massive to a more massive planet—from Venus to Neptune—there would be a corresponding increase in radius as well. This would not be invariably true in a straight-line sense since the more massive bodies might sometimes have greater densities. But as a general rule we would expect it to hold pretty well, as it would certainly take a lot of crowding to get the mass of Saturn down into the shell of Mercury.

But now the East Indian physicists, D. S. Kothari and R. C. Majumdar of the University of Delhi, in recent papers in the leading scientific journals of *Nature* and the *Monthly Notices of the Royal Astronomical Society,* have come out with a case for what is very similar to precisely this kind of a planet. They have shown that beginning with stones the size of the Moon, Mercury, Uranus, et cetera, the radius increases as the mass increases up to a certain limit. Then, according to their formula, after passing this limit as the mass continues to increase the radius *decreases.* Away over on the other side of the hump, in the curve opposite the planets, are located the white dwarf stars—Sirius B, o_2 Eridani B, Procyon B—objects with the mass of the Sun but the body of a planet. Kothari and Majumdar have calculated curves for hydrogen and iron and find that both planets and white dwarfs all fall between these extremes. (Figure V.)

From this point of view a planet is a black dwarf—star which has ceased to radiate—of mass less than about one one thousandth of the Sun, for which a smaller mass corresponds to a smaller size globe.

One of the most interesting features of the theory is that Jupiter appears to be about the largest stone that can possibly exist, for he fits right onto the maximum of the curve. And thus 61 Cygni C, although fifteen times more massive than Jupiter, would be about the size of Uranus. To squeeze this amount of matter into this size container would mean that most of the interior would consist of degenerate stuff with a density thousands of times that of ordinary substances such as granite, lead, or osmium.

Since some of the readers may be unfamiliar with the notion of highly collapsed matter, perhaps the following illustration may be helpful. The analogy is far from exact but it may serve to fix the idea.

Imagine a crate filled with one hundred light bulbs packed in boxes of ten each with a protecting cover around the bulbs. By removing the bulbs from the boxes, throwing away the covers, and crowding the bubs together as much as we dare, it might be possible to get one hundred seven light bulbs into the crate. Under ordinary circumstances we would say that the density of electric-light bulbs in the crate is very high. This would correspond to the condition of atoms in ordinary dense material found in the crust of a planet.

But if the globes were smashed into tiny pieces we could easily pack the fragments of thousands within the crate. True they would no longer be in the

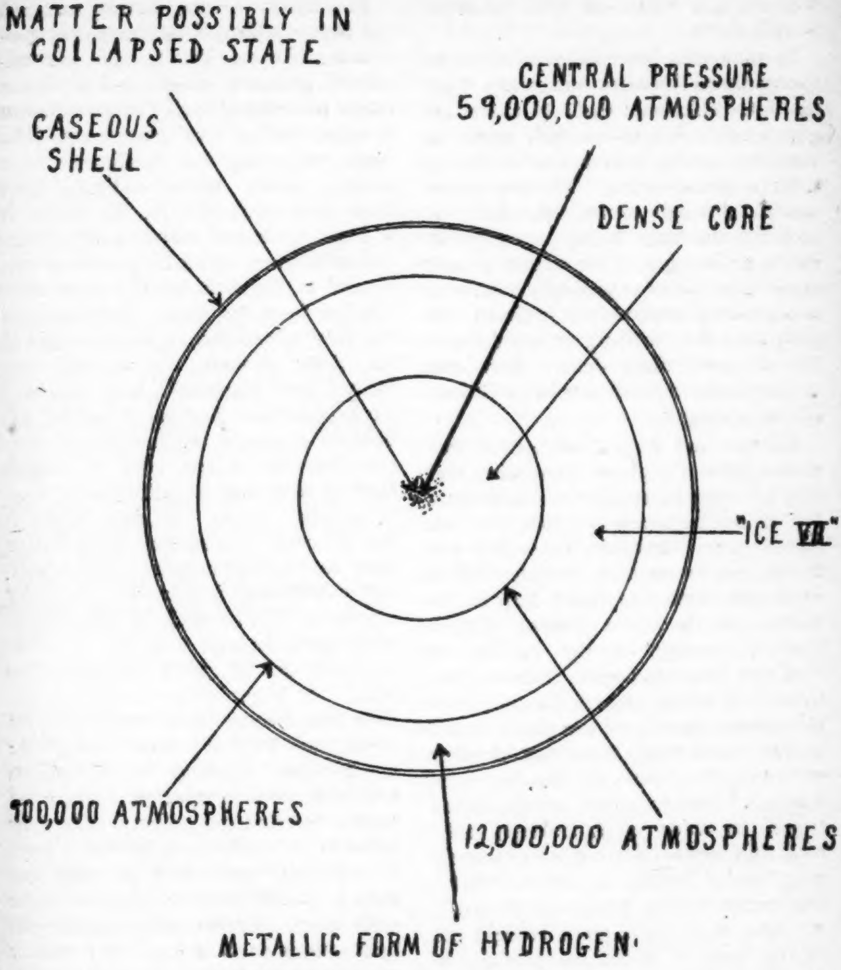

MATTER POSSIBLY IN COLLAPSED STATE
CENTRAL PRESSURE 59,000,000 ATMOSPHERES
GASEOUS SHELL
DENSE CORE
"ICE VII"
100,000 ATMOSPHERES
12,000,000 ATMOSPHERES
METALLIC FORM OF HYDROGEN

FIGURE VI.

The interior of a massive planet, according to the three-layer theory, which is the oldest and one most generally accepted at present. Jupiter is the example shown here.

On basis of this theory, at center of a massive giant planet is a dense core of metals and silicates resembling a terrestrial planet. In deep interior pressure may possibly be so great that a small quantity of the matter has collapsed into the dense degenerate state.

Above central core is a thick layer consisting of some high-pressure modification of water such as "ice VII," recently observed in the laboratory.

Overlying ice is a layer of solid hydrogen in a dense metallic state.

The planet is surrounded by a very thin gaseous layer, which is all we are able to see of the surface through the telescope.

form of light bulbs, but their substance is still there.

In somewhat the same manner, when the pressure becomes sufficiently high the outer electronic shells of atoms begin to collapse down to their nuclei so that they occupy only a fraction of the space originally filled. The degenerate matter, although exceedingly dense, is at the same time highly compressible like a perfect gas. We cannot picture degenerate matter realistically because it is so utterly contrary to ordinary experience. Try to imagine a substance ten thousand times denser than steel that expands and contracts like a balloon full of hydrogen!

Kothari and Majumdar believe that as the mass of a planet approaches that of Jupiter and Saturn the matter near the center begins to go into the collapsed state. Probably Sirius B is not the nearest source of degenerate stuff as small quantities may occur deep in the interior of the major planets. But a large percentage of the interior of 61 Cygni C would consist of dense matter. If it is the size of Uranus, then the *average* density of the planet would be four hundred ten times that of water or seventy-four times the density of the Earth. Thus even the surface layers would be made of exceedingly solid rock. Of course, dense matter can only exist under terrific pressure and for that reason we can never hope to see it. As soon as a chunk were brought out in the open it would immediately be transformed into ordinary material. The surface gravity would be terrific—of the order of 300g. A man would be flattened out like a jellyfish, and even bacteria would have trouble in navigating.

Since 61 Cygni C is intermediate between the solar type of planets or black dwarfs and the stellar white dwarfs, it is seen to be an anomalous object belonging to neither, but with some of the characteristics of both. A sort of hybrid or gray dwarf.

The theory of the Indian scientists has been challenged by the young geochemist, Rupert Wildt, who has calculated pressures at the center of the major planets and finds them insufficient to crush matter into degeneracy. His ideas concerning the constitution of a massive planet differs radically from those just outlined. At the center is a dense sphere of metals and silicates not unlike a terrestrial planet that was formed in the early cooling stage after ejection from the Sun. (According to the *very newest* theory of the origin of the Solar System, the planets were formed from filaments thrown out by a Cepheid variable that got to panting too hard as it passed another sun.) Surrounding the central core is a thick layer of what may be called ice for want of a better name. At deep levels in the primeval atmosphere the pressure must have been enormous. From laboratory experiments it is known that under a pressure of thousands of atmospheres water goes through a variety of modifications, one of which is called "ice VII." It is probable that ice of this form would condense directly out of the atmosphere without passing through the liquid phase, although Wildt believes the existence of a transient shallow sea cannot be ruled out entirely. Over the ice stratum would be deposited a layer of solid hydrogen which probably also passed straight from the gaseous to the solid state. Recent data suggest this hydrogen is in a strange form closely resembling a metal in many properties. Finally over all three shells is the thin, gaseous atmosphere of methane and ammonia that we see in shifting belts with the telescope.

Thus it is seen that we have just enough theoretical knowledge to make guesses at the physical state of the new planet without being able to make any definite statements about it or give an emphatic NO to even the wildest proposals. An ideal world for exploration via Science-Fiction!

Will it ever be possible to discover

extra-solar planets except by long series of precise photographic observations? At present there is not even a glimmer of a practical alternative method. The interferometer in expert hands can undoubtedly be made to yield positions of a new order of accuracy over the micrometer and even the photographic plate. This has been demonstrated already by means of the results obtained in 1921 with a 20-foot interferometer attached to the 100-inch.

Perhaps after the war, when scientists cease to struggle with new instruments for directing aircraft or guiding torpedoes, spotting invisible planets a few score light years away will seem as easy as locating the big dipper. Perhaps.

But as Dr. Strand, who is now in the army himself, remarks near the close of his paper:

"I cannot think of any way to observe this small object directly."

ADDENDUM

Shortly after this article was sent to the editor, a paper from the Leander McCormick Observatory of the University of Virginia was published, giving details of the binary system of 70 Ophiuchi. Irregularities in the motion of one component have been explained as due to a third invisible body with a mass even smaller than that of 61 Cygni C. It revolves in a period of seventeen years and has a mass of one one hundredth that of the Sun, which is equal to 10.5 Jupiters or 31.7 Earths. Astronomers at Leander McCormick do not go so far as to call 70 Ophiuchi C a planet, but refer to it rather as a faint object or very small body. The results are not so conclusive as in the case of 61 Cygni C, and extend over a period of only twenty-eight years from 1915 to 1943.

Although this seemingly is in direct contradiction to the author's remark that discovery of interstellar planets by this means will always be a rare event, it is felt still to hold good. The tooling-up process is just naturally too long to produce these planets on a very large scale.

Dr. Henry Norris Russell of Princeton University, one of the foremost authorities on the constitution of stars and planets, has published a paper on the probable nature of 61 Cygni C which appeared too late to be included in the present discussion.

He stresses the large uncertainties which are necessarily involved in speculating about such a remarkable object since all calculations must be made from extrapolations from laws applying to ordinary matter.

His principal conclusion is that we are justified in calling 61 Cygni C a planet. Whether it is regarded as a star or planet depends chiefly upon the definition adopted. We would probably call a planet a body in orbital motion around a more massive luminous primary, and shining by reflected light. It certainly satisfies the first part of the definition, and, even if C is feebly luminous, the light reflected from the primary must be much greater than the light it radiates.

Dr. Russell finds that in its internal constitution C resembles a star with a minimum diameter about like that of Saturn, but differs radically from the structure of the major planets.

For the benefit of those readers who may wish to have on file among their copies of Astounding an exact statement of all the facts pertaining to such an important object as the first known interstellar planet, the following summary is appended.

Following are recorded the chief facts in this great discovery:

Discovered by K. Aa. Strand of the Sproul Observatory, Swarthmore College, Pennsylvania. First announcement in paper read before American Philosophical Society in November, 1942. The investigation commenced by

Strand at the University Observatory, Leiden, Holland, in 1933. Success of research depended upon accurate photographic positions of the components together with best visual measures. Length of interval covered by these observations was one hundred and ten years.

The distance of 61 Cygni C, corresponding to its latest parallax of 0.294 seconds of arc, is 11.084 light years.

MAIN SYSTEM (A and B)

Period	720 years
Eccentricity of orbit	0.4
Length of semi-major axis	83.8 astron. units
Distance at perihelion	50.3 ” ”
Distance at aphelion	117.3 ” ”
Present separation	110 ” ”
Dynamical mass of system	1.12 X SUN
Epoch = Time of perihelion passage	1690 A. D.
Visual magnitude of A	5.57
Spectral type of A	K6
Mass from Eddington's M-L relation	0.58
Visual magnitude of B	6.28
Spectral class of B	M O
Mass from Eddington's M-L relation	0.55

SECONDARY SYSTEM (B and C)

Period	4.9 years
Eccentricity	0.7
Length of semi-major axis	2.4 astron. units
Distance at perihelion	0.7 ” ”
Distance at aphelion	4. ” ”
Dynamical mass	0.016 X SUN or 15 X JUPITER

(1 astron. unit = 92,897,416 statute miles)
Mass of SUN = 329,390 X EARTH
Mass of JUPITER = 314.498 X EARTH
1 light year = 5880 billion miles

THE END.

The Renegade

by Marion Henry

In a way, he was a naturalized citizen of a very alien nation, a naturalized member of an alien race. It was hard to determine where his loyalties belonged. For he was something of a king among the aliens—

Illustrated by Orban

Harvey Lane squatted just inside the door of the chief's thatched hut, his outward attention divided between the chief's laborious attempts to sew on a button belonging to Lane's only pair of shorts and the life in the village itself. Outwardly, it was little different from that of any other inland African community, though the cleanliness and the absence of a constant confused babble were strange, as was the lack of yapping cur dogs underfoot. But to anyone else, the huge females busy at their gardening or making the crude artifacts possible with the material at hand, the playing young, and the bulky guards squatting in the lower branches around would have been distinctly not normal.

Lane was used to it. In eight years a man can become completely accustomed to anything, even the sight of some hundreds of gorillas busy at work that would normally be men's. He knew every one of the hairy, heavily muscled apes out there, so well that he no longer saw their faces as ugly things, but as the individual countenances of friends and students. Now he leaned further back, brushing against a muscular shoulder while one of the bulls in the hut flicked a fan back and forth to keep the flies off his hairless hide until the chief finished the sewing and he could put on his tattered shorts again.

Ajub, the chief, had been thinking; now he picked up the conversation again, his voice thick and slow, and the consonants sometimes distorted; but his speech in the English for which they had so gladly exchanged their own primitive, unexpressive tongue was no worse than could be found in parts of the larger man-cities. "It was about fifty years ago, I think, when we decided to come here and build a village away from all the blacks; we'd been trying to learn from them before that for maybe a hundred years, but all they showed for us was hatred, fear, and a desire to kill us and eat us, so we gave it up as hopeless; the harder we tried, the more afraid of us they became. And the one white man we'd seen before you came, hadn't been exactly friendly; he killed several of our tribe before we were forced to eliminate him and his group. Beyond that, our memory and our poor speech give no clue. Are these mutations really common, Lane?"

"Fairly, though I think they're a hit-or-miss proposition, Ajub; it's a matter of blind luck when one is useful and dominant enough to be passed on." Lane reached toward the basket of dried fruits, and one of the gorillas handed it across, plucking an insect from the man's shirt carefully. "There must have been a lot of mutations running around the tribe before they all concentrated in the one offspring, and he passed that down, with his children spreading the combination further. Even then, it's hard to realize that you changed from a bunch of savage beasts like the other gorillas into a race at least as intelligent as man in less than five hundred years! Wish I knew more about the subject of mutations."

"Our good luck is that you know as much as you do about so many things. Before, we groped blindly for the truths without even realizing the order of nature, yet now we may be able to build on your knowledge, in time— Here, I can't do any better with these unskilled hands." The chief handed the shorts back, and his words concealed none of his pride in having accomplished it at all. While the younger members of the tribe were showing surprising dexterity, even to the learning of a fine style of script writing, the oldsters approached delicate work with much determination and little skill. "And if you're to have your supper, we'd better begin the hunt. What would you like?"

Lane considered. "Antelope, I guess; a good broiled antelope steak would be fine. And watch out for the cats."

He grinned at Ajub's grunt, and watched the massive apes go out after their leader, some armed with bows having two-hundred-pound pulls, others with the throwing sticks and spears Lane had taught them to make and use recently. Ajub carried the latter, and the man was well aware that the lions would stand small chance against such a combination of weapon, intelligence and muscle. He'd seen the chief toss the twelve-pound spear a good five hundred feet, to pierce cleanly through a full-grown lion and pin it to the earth on the other side. Antelope steaks for supper were a certainty.

He was useless on a hunt, being too weak and too clumsy, so he remained where he was, squatted comfortably in the sunlight, exchanging greetings with the few who passed the door of the hut, calling out occasional instructions to Ajub's youngest wife as she began grinding grain in a mortar. Off at the side, he could see a group of middle-aged bulls at work, slowly chipping and burning out two heavy wooden wheels for a new cart, and he wished briefly that he could locate a vein of metal ore somewhere to give them better tools. Still, they almost made up in muscle for the quality of the instruments they used. Beyond, another younger bull was laboriously constructing a solid-log hut on pioneer lines to prove to a young female that he would make a fine mate. Lane leaned back against the frame of the door lazily, chewing on the sun-dried fruits.

The old days were gone; the play-boy reputation, the smutty divorce trial Linda had put him through, the drunken orgy of forgetfulness were all a part of some remote past. He'd been a failure there, as he'd been on the crazy hunting expedition into this country, and the still crazier idea of tracking down the legends of the blacks that dealt with the "wild men of the woods" without the help of experienced guides. He'd been such a fool that his only answer to the superstitious fears of the blacks had been the promise of more money later. Well, he learned better when he awoke to find himself alone, with only his rifle beside him, holding two forlorn cartridges.

Now that Harvey Lane was dead; he'd died while stumbling on in a fever that carried him into the little village of the gorillas, who'd tended and healed him before his delirium was over and he could realize they were other than normal. Here, now, Harvey Lane was greater even than the chief, the teacher of the young and the old who wanted avidly to learn, living in the chief's own hut and fed by the chief's spear. From early morning to mid-afternoon, he taught them all he could, and from then on he loafed or did as he pleased. The village was his to command, and the miserable failure had become the lord high priest of knowledge, who knew that the stars were other suns and that the dust under their feet was made up of countless atoms.

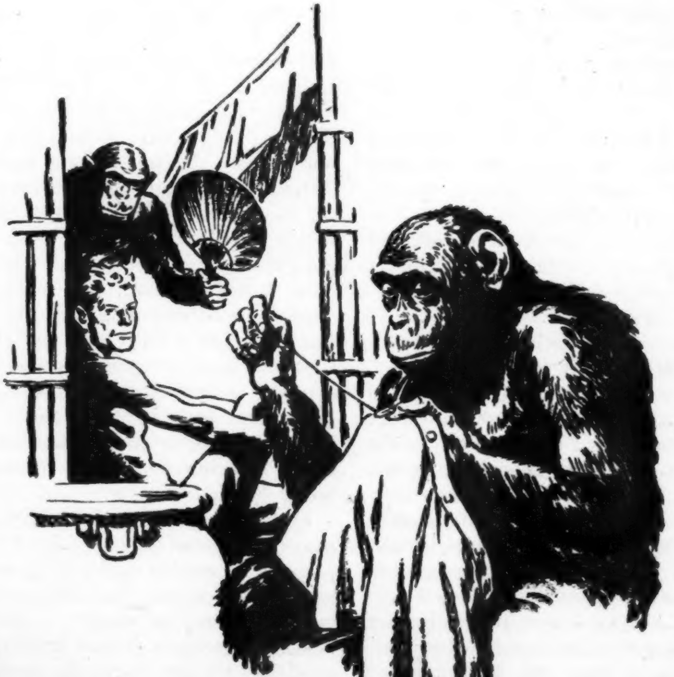
Little Tama entered the square, interrupting Lane's reverie as he came plunging toward the hut, dragging some heavy box behind him. "Teacher!"

"Not now, Tama. School's over. I'll tell you about germs again tomorrow. Go and play now." His largest trouble was in holding their eager minds to any reasonable limits—quite different from the problems of most of the teachers he had known.

But Tama was unwilling to be dismissed this time. He fidgeted, unhappy at disobeying his oracle, but filled with the importance of what he had to tell. "Teacher, I found something! I think it's full of *books!*"

"Huh?" The only book in the village was a small first-aid handbook he'd had with him, almost worn out from too much handling. "Where, Tama?"

"In this box." The young ape ripped some of the boarding away further and pointed to the contents, throwing his hundred and fifty pounds about excitedly as Lane drew the object back inside the hut and examined it. It was a heavy wooden box, obviously from the outside world, judging by the letters that



were now illegible, stamped onto the sides.

Quickly he indicated that Tama should pull all the cover off, his eyes darting down to the regular row of objects revealed. *"Encyclopedia Britannica!* Lord, Tama, they *are* books; they're the collection of all man's knowledge. Where'd you find this?"

"Dead black man came down the river in a boat, like the boats that went up two months ago. I thought you'd like it, teacher, so I swam out and pulled it to the shore." His eyes darted up, and Lane nodded quick approval, knowing the aversion they felt toward the water. "The books were inside the boat, under the black man; I threw him away and brought the box to you."

Nothing is surprising in Africa; Lane had seen chiefs wearing alarm clocks tied around their heads for crowns, had met others with Oxford accents, and had stopped wondering at their idiosyncrasies; probably one had ordered the encyclopedia, only to have it stolen from him; or possibly it had been robbed from a safari under some white. Whatever its source, he was struck only by the singular good luck that had brought it drifting down the stream and sent little Tama out to collect it; here it was the treasure of all treasures.

"Good boy, Tama; Ajub himself will give you a spear for this, and I'll answer all your questions for a month. Anything else in the canoe?"

"A few things, teacher. The boat is on the river bank, if you want to look."

Lane nodded, following the pleased and excited little ape through the village toward the river. He nodded at the guards, received an answering grunt that told him the river trail was safe, and went on, picking up a child's spear that was light enough for him to handle. Normally, the river was deserted, but occasionally a canoe or more of blacks went up or down it, hurrying to get out of this country painted so darkly in their superstitions; then the apes avoided showing themselves, or were careful to appear the simple brutes that they seemed.

Tama, he reflected, must have been disobeying orders when he sneaked out to watch the river while the guards knew from their outposts several miles up that there was a canoe coming. But he said nothing to the ape-child as they trotted down the trail, trying to imagine the expression on the chief's face when he returned and found a whole set of encyclopedia waiting for him. Lane had mentioned such books before often enough when his little fund of general knowledge was exhausted. Then the short trail ended, and Tama ran forward quickly, dragging the canoe further onto the bank.

"See, teacher. I only moved the black man and the box."

Mostly, the contents were such junk as any black native might acquire, bits of trade cloth, a few cheap beads, a copper bracelet, and a small collection of rotting foodstuff that Lane threw hastily into the river. Under that was the stained, dirty shoe of a white woman; a size three, too small for any native! He picked it up slowly, reluctantly turning it over in his hands without hearing the questioning babble of Tama. A silly little gold dancing slipper, size three Triple A, lost on this savage continent, carrying with it all the giddy folly of the woman who must have worn it once. A small, lithe woman, probably young, wearing a toeless shoe with a long spike heel, laughing and dancing in some white city, drinking and flirting, and gossiping as Linda had back in New York, when he'd been foolish enough to think she loved him instead of the fortune his father had left him.

For a moment, as he held it, he imagined that a trace of some faint feminine perfume lingered on it, over the stinking smell of the canoe. The illusion passed, but the memories caught at him and held, even when the shoe fell from his hand into the current of the water and went drifting off, sinking slowly. Girls, women, clubs, dances, parties—the rhythm of a jazz band, the laughter of a crowd, the excitement of New Year's Eve in Times Square, Madison Square Garden—the mocking twist of a girl's face avoiding a kiss she'd give willingly later; the rustle of silken cloth, and the smooth outlines of a feminine back in evening dress; the sound of a laugh coming from the bath as he waited for her; the sudden look that could pass between two people over a drink as they sat at a bar! Women, horse-races, laughter, music—the purely human part of civilization!

"Teacher?" Tama's voice was puzzled, and he plucked at the man's sleeve doubtfully.

Lane straightened, brushing the silly tears from his eyes and trying vainly to kill the ache that ran through him, knowing he could not. "It's all right, Tama."

But he knew it wasn't. He knew that, even before his feet carried him forward and his arms reached for the prow of the canoe, too heavy to move by himself. Tama saw him try, and the young ape leaped forward, only too happy to help in any way he could. The boat slithered and slipped into the river, while Lane's feet lifted over the side and he settled in it, his face pointing down the river, his hands reaching unconsciously for the paddle. Tama started to clamber in, but he shook his head quickly. "No, Tama."

"Why, teacher?"

"Because I'm going away, Tama, and you can't go where I must. Tell Ajub the books can serve him better than I could and that I've gone back to my people! Good-by, Tama."

"Teacher! Don't go! Come back!" It was an anguished wail, as the ape-child leaped up and down on the bank, but the boat was sliding away, already out of reach. Lane sighed softly, glancing back and waving at the bend in the stream, before he lost sight of the familiar landmarks. But from behind him still, he heard the wail of the ape. "Teacher, come back! Don't go away, teacher! Come back!"

The sound seemed to haunt Lane during the short time that day was still with him; then it vanished into the jungle night, muffled by the calls of the great cats and the constant murmur of the stream. His shoulders ached deadly, moving the paddle steadily, driving the canoe onward. His stomach was empty, but it never reached a conscious level. He hunched forward as he stroked, unaware of fatigue or hunger, not knowing at the moment that there was anything except the tumult of emotions inside him.

Somewhere, the river had to flow into a lake or the sea, and before that there'd be white men. Africa was by no means entirely explored, but the whites were everywhere, save for such scattered little places, unimportant and uninviting, as the tribe had chosen. The whites might be only a hundred miles away or a thousand, but the stream flowed toward them, carrying him onward at perhaps seventy miles a day, in addition to the impulse of his paddling.

He stopped once to approach the shore and locate a clearer section, where a tiny stream joined the larger one. There he leaned over and quenched his thirst, grasping the low limb of a tree to steady the canoe. Twice, fruit overhung the water and he gathered in handfuls of it, storing it in front of him, then going on, begrudging the time taken in eating it.

He was still paddling onward when the sun rose again, quieting the cries of the carnivores, and filling the air with life. He ate hastily of the fruit, drank again from water that was none too clean, barely avoiding the form of a snake that had crawled out on a branch, and picked up the paddle to go on. A crocodile opened its jaws and snapped within inches of his paddle, but he hardly saw it.

Fatigue could not be avoided or ignored forever, though, and he was finally forced to pull in his paddle to keep from dropping it overboard out of numb fingers. He slipped down into the boat, letting the sleep roll over him, waking only fitfully when the boat drifted into the quiet shallows along the sides, sending it out again into the main stream, and going back to his crazy dreams. Even in sleep, the onward drive possessed him completely.

Another night came, and his paddle rose and fell monotonously until it gave place to day, and the heat and fatigue forced him to stop again. And a third night was going when the little river opened onto a larger stream, with a swarm of native huts stinking up the air near the joining point. Some of the blacks saw him and yelled, but there was no sign of whites near them, and he lifted the paddle once, then dug it into the water and drifted beyond the smell of the village. At least he was reaching populated country, and white men must be near, somewhere.

That day, he paddled on, unmindful of fatigue, noting other villages along the way. Once a canoe shoved out from shore, but turned back after a short chase, whether friendly or otherwise. The chief had been wearing a high hat, and there was no longer any doubt as to the nearness of his own people! Sluggishly, hour after hour he sat there paddling, not even stopping to drink the dirty water; his supply of fruit was exhausted, and there was none at hand, but he shrugged the hunger aside. Always, one more hour might bring him to a settlement.

The stink of another village had come and gone when he heard the splashing of many paddles behind him; looking back, he saw the river filled with three boats, each carrying about a score of the blacks, yelling something in a native language full of labials as they saw him turn. Whatever it was, it sounded far from friendly, and he spurred his efforts, trying to leave them behind. Even in semicivilized parts of Africa, a lone white man might be more valued for his possible possessions than for the civilization his race brings unasked.

The paddles behind drew nearer, and he knew he had no chance against their well-manned boats, but there was still some hope that he might get beyond the distance they were willing to pursue. Then a short spear with a long notched iron point slipped by within inches of his shoulder. Apparently they waited after that to see whether he would pick up a gun and return their fire, but took heart as he made no sign of doing so. Other spears began coming toward him, one striking the rear of the canoe and shivering there, half-spinning him about in the river.

He gritted his teeth, hunching low and throwing his weary shoulder muscles into the paddling, wondering whether cannibalism had entirely died out. If only a white would appear somewhere, or some other village into which he could turn on the chance that they might be friendly! The river remained bare ahead.

They had ceased throwing spears, probably waiting to get closer for a better chance, and he stole a brief glance backward, to see a man standing in the front of each canoe, his spear raised. As Lane looked, the leading one drew his arm back with a quick jerk.

It missed by scant inches as he dropped into the canoe, the paddle slipping from his blistered hands! Then, a roar seemed to split the air from the side, and there came the sound of a savage thump from behind him, followed by a splashing of the water and the confused, frightened shouts of the blacks. He raised his head to see something come flashing toward a second boat, ripping it open below the water line, just as the third spear slid across his forehead in a savage lance of pain!

Then he was dropping back again, feeling consciousness run out of him in slow lingering waves, while warm blood poured down his face and mixed with the filth at the bottom of the canoe. Either the boats behind had ceased paddling, or his ears no longer heard them. Vaguely he wondered what had caused the havoc he'd glimpsed, but the thought was fading as it entered his mind, and the blackness won over it. The canoe drifted on, bumping into shallows, twisting about, sometimes hitting midstream and rushing along. Flies hovered over it, but they no longer could bother him. Only the shallow rise and fall of his breast attested to life. The next day found him still drifting, but now the red flush of fever was spread across his face, and he moaned and twisted, reaching futile hands toward the water around him, only to drop back weakly.

There must have been moments of semiconsciousness. Dimly he was aware of shouting and jarring, of being lifted out of the canoe and being carried somewhere by gentle hands. And there was the sound of speech around him at times, something soft under him into which he sank, and some dim feminine face. But such things were all clouded with dream-phantoms and the sound of his own voice rambling on and on. A vague sense of passing time struck him, and he was somehow aware of days going by slowly.

At least his surroundings came as no surprise to Lane on the tenth day, when the fever vanished suddenly, leaving him weak and sickened, but lucid and free of its grip. Above him, the face of a middle-aged woman—a white woman—drifted around a room filled with the marks of civilization. She was dressed in light clothes, and there was a faint rustle of cloth as she moved, a fainter odor of some inexpensive perfume, now only a ghost left from the last time she'd used it. Weakness hit harder at him, and he fought to hold his eyes open as she brought a bowl of some broth and began feeding it to him carefully. Seeing that his eyes were open and intelligent again, she smiled, propping his head further up on the pillows, brushing

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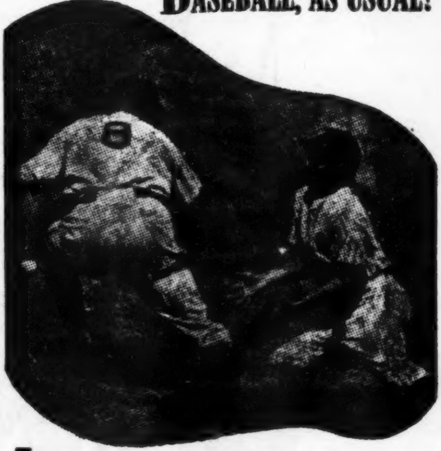

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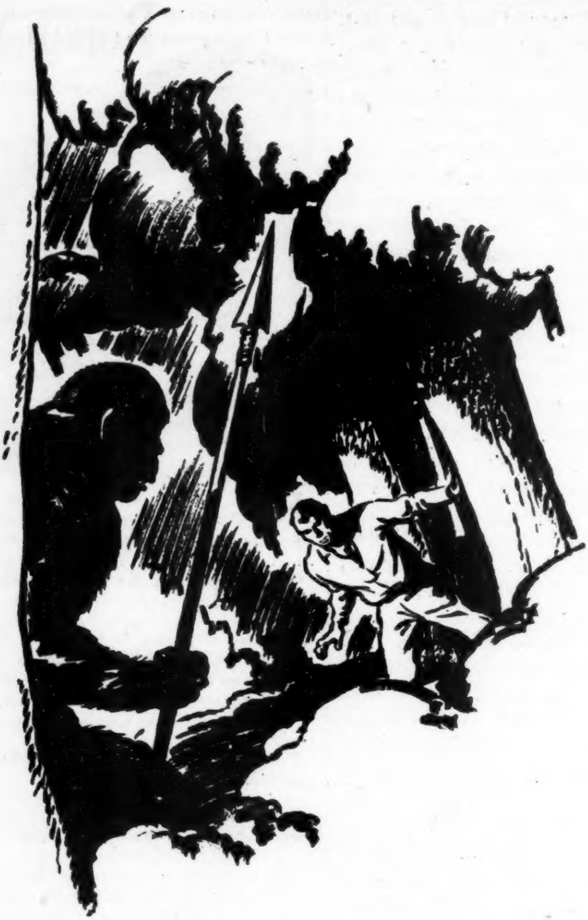

the hair back over his forehead, where only a trace of pain marked the cut made by the spear.

"Where—"

"Shush! You're among friends here, Mr. Lane. We found your canoe by luck and we've been taking care of you; you'll be all right in another week—just the fever and the loss of blood. One more swallow—that's it. You mustn't talk now, though; just relax and go back to sleep. Everything's going to be all right."

The words, the feminine voice, the smile all lingered in his mind after she closed the door; he lay quietly on the bed, savoring the feeling of being among his own kind. But the sleep would not come, though he closed his eyes and tried to obey her; he heard the door open once, to close quickly, and her voice whispering beyond it in answer to a faint question. "He's asleep, Sam. Poor devil!"

People; his people! Men and women who talked too much about things that were of no consequence, laughed when there was no reason, cried when they felt no pain—weak, puny, silly creatures like himself, climbing slowly and erratically upward to the sound of their idle chatter!

It was too much to put into words as he lay there, watching the moon stream in through a screen window and wash over the bedding, across the room and onto some picture hanging on the wall. He sank deeper into the bedding, letting the idea seep in slowly, and the men's voices outside were only a background to it at first, until his own name caught his attention.

It was a rough, good-natured voice, probably the man to whom the woman had spoken before. "Imagine Lane out in that over eight years, Harper; it's a miracle he got back at all, without going insane for good. Wonder how he'll find life now, though?"

"Meaning?" The second voice was younger, sure of itself, arrogant in a cultured sort of way that indicated mostly a carelessness at ordinary weaknesses.

"Meaning things have changed for the man; you know—he's been declared legally dead, of course. He used to be quite a character from the newspaper accounts I read when I was visiting my sister in America. But by this time, most of his fortune's been split up and spent, and I don't know whether he can get hold of enough to live on now. Certainly not the way he used to. Then there's the war going on and all. It'll be a funny world to him, with most of his friends changed and grown away from him."

"Yeah, I suppose so. But it can't be any stranger than what he's been through, Livy."

"Hm-m-m." The tone was doubtful, but they were quiet then, a faint odor of tobacco drifting in through the netting over the windows. Harvey Lane lay still, turning it over in his mind and listening for more words that did not come.

He hadn't thought of all that, of course, but he should have. When he didn't come back, the vultures would have lost no time in swooping in to claim his money; and knowing them, he could believe Sam Livy's doubt as to how much would be left. What the taxes and lawyers had left would be gone long before this. Still, he wondered how much that mattered to him.

The ring on his finger still would secure passage back with a few hundred dollars to spare. After that, he'd worry about it as it came, even though he possessed no skills with which to earn his living; life among the apes had stripped him of the false standards of living, had hardened him and left him with no fear of work, and had taught him the appreciation of simplicity. He'd make out; how didn't matter, as long as he was among his own kind again.

Harper's brisk voice picked up the conversation outside. "Guess I'll be pulling out tomorrow, Livy. The boys are all ready, and the group I'm leading is sort of anxious to get started. Hope it's not entirely a fool trip."

"I wouldn't bet on it; the man's been through hell, and it may all be delirious ravings, like that nonsense about the gorilla tribe speaking the purest English!"

"I'll take a chance on it. At worst, it's new country and there should be plenty of game there. Anyhow, there was that Frenchman who spent a couple of years among a bunch of gorillas without being hurt—that seems to be on the level. Maybe Lane did live among 'em for a while, probably getting them and a tribe of blacks who rescued him later all mixed up, with some other things thrown in. I'm betting he did, since some of the things he kept muttering make it pretty plain he knows a good bit about the habits of the apes!"

There was the sound of a match striking, then Harper's voice went on again. "Besides, it isn't such a long trek, and all we have to do is follow the river, the way he indicated. If there are no gorillas, we'll have a nice trip, and the would-be big game hunters with me will get their fill; if the gorillas are there, I'll get me a couple of nice pelts for mounting, and with luck maybe capture a couple of young ones. They'll fetch a sweet price if the hair's as light a red as Lane was raving about."

"Well, I wish you luck, but—"

"No luck needed, Livy. With the equipment we've got, a dozen tribes of gorillas as smart as he made out wouldn't worry us, and I'll get mine, one way or another. I figure we can leave here—"

But Lane wasn't listening then. He was seeing old Ajub mounted in a museum, his gray-speckled red pelt stuffed, with a placard under it; and he was thinking of little Tama crying in a cage somewhere, while fools debated whether an ape could be intelligent; or little Tama being examined by scientists to determine his ability to think, while searching parties went out to bring in more of these curious anthropoids. Oh, they'd fetch a wonderful price, all right!

Perhaps it was logical that man should brook no rivals to his supremacy. But in any event, the outcome was certain. Even the primitives of his own race had fared badly enough, and the apes, no matter how intelligent, would remain only curious beasts, unprotected by any man-law, and sought for by every showman and theorist in the world.

Very slowly, without noise, he slid out from under the bedding, forcing himself to his feet in spite of the weakness that ran over him. For a moment it seemed that he might faint, but that passed; while his knees shook under him and the room seemed to spin around him, he conquered himself enough to stand alone and to move toward the closet the moonlight revealed. Inside there were clothes which did not belong to him but which fitted him well enough, and he drew them on, supporting himself against a wall.

The silhouettes of the two men on the porch were undisturbed as he glanced about, and he scanned the room hurriedly for a rifle or automatic, but saw none; he dared not venture into other rooms. There were few things that would be of value to him, save a basket of fruit and homemade candies, but he stuffed his pockets with them, forcing down the too-sweet stuff to provide the energy he needed. Finished, he ripped aside the netting over the back window, being careful to muffle the sound, and let himself drop shakily to the ground below, hanging onto the window frame and forcing himself to cling to his consciousness.

He rejected the use of a canoe, knowing that he could never paddle even a light one up the river. Beyond, in the stables, a horse whinnied softly, and he debated chancing that, but gave the idea up; he would be too easily seen leading one away, and he was in no condition for a wild chase. Besides, the horses might give the alarm if a stranger approached them, and his only chance lay in stealth.

Picking the deeper shadows, he crept out away from the house and toward the gate of the compound, now guarded by a sleeping blackboy. The snores continued undisturbed as he let himself out, and the great continent lay before him. To one side, he saw the river and headed for it, knowing that he must stay beside it and follow it back the way he had come.

It was an utterly stupid business, without the faintest hope of success, and his rational mind knew that. Even if he could stand the long trip, and avoid all carnivores and hostile blacks without losing his way, it was an almost impossible task, with no equipment or food. Besides, Harper and his crowd would be pushing on rapidly, probably doubling the distance he could cover in a day. And there was always the possibility that they would decide to trail him, believing he had wandered off in a fit of delirium; on horseback, they could catch up with him in short order.

He forged ahead as rapidly as he could, leaving the last signs of the white quarters behind and picking his way along the rough trail that ran beside the river, limiting his stops for rest to the briefest time he could. Here the moon shone fitfully, brilliant at times and hidden by trees at others. He had no way of knowing what dangers were lurking around him in the jungle that began beside the trail, and he disregarded them; if he had to die, then he would, but at least he could make the attempt.

Then, off to the side and behind he heard something moving through the strip of jungle; the sound was of one animal, and a large one, moving with some stealth, but not overly worried about noise. For a moment, he considered climbing upward out of reach of whatever it was, but it was nearly day, and probably only a lion making its way home after a night's feeding. The fact that he could hear it with his comparatively untrained ears was encouraging, for he knew the cats could move silently when they chose. He got to his feet, chewing on more of the candy, and continued onward grimly.

The sound came again, this time slightly nearer; maybe that lion, if such it was, was going home hungry instead of after feeding. Sometimes when bad luck had bothered them, they were quite willing to vary their diet with a little human meat, though this seemed rather close to the guns of the whites for a man-eater. He was staring back down the trail, trying to see his pursuer, when his name was called.

"Lane! Harvey Lane!" It came now from the side, muffled from its passage through the jungle growth, the sound of the creature he had heard before accompanying it. He jerked around, setting his eyes frantically to darting about, but seeing nothing. So they'd found him, already, and were probably surrounding him carefully on the theory that he was mad! He slipped to the side of the trail, hoping to find a place where he could hide, and knowing he'd have no chances, when the voice came again, this time clearer. "Teacher!"

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"Ajub!" And even as he spoke, the great ape stepped quietly onto the trail in front of him, the huge spear poised easily, and several others carried in a sling.

"Hello, Lane! I thought those were your tracks leading away from the place back there when I smelled them, though I couldn't be sure with all the various human scents around. You have no business unarmed out here!"

Lane sank down on the ground, relief and fresh fear coursing through him at the thousand ideas the ape's presence brought to his mind. "Ajub, those people—the other whites—they're organizing a hunting expedition against your kind. I babbled in my fever, and they're probably already started."

The heavy-featured face betrayed no emotion. "I know. I found a way to get close to their huts, and I've been listening to the plans. It doesn't matter."

"But they're well equipped this time; you can't eliminate them all!"

"Naturally. But they won't find our village; another bull came with me, and I've sent him back with the word. He'll have us moved out to another place we found long ago, and an even better hiding place. When your friends reach the old one, there'll be only a piece of burned-over ground, with no trail behind to betray us."

The load that lifted from Lane's shoulders then was almost physical, and he climbed to his feet again, with the help of one of Ajub's muscular arms. "Why'd you follow me, Ajub? You had the books, and they hold more knowledge in better form than I can give you. You had no need of recapturing me!"

"Nor intention; you were free to leave us any time you wished, Lane—I thought you always knew that." Ajub shook his heavy head, rattling the big spears on his back. "Physically, you're only a child to us, you know, and you needed protection; we were merely serving as your bodyguard down the banks of the river. If we hadn't, those blacks in their canoes would have captured you, too. And after you were found, sick and raving about us, I naturally stayed."

Lane should have known that only Ajub's people could have broken up the canoes at their distance from the shore, without the sound of guns; but he'd had no time to think of the incident since. He felt the tender scar tissue on his forehead, grimacing, and shrugged. "You might as well have let them succeed—then I couldn't have betrayed you to the whites! Well, get it over with!"

"What?"

"Your vengeance. It's what you stayed for, isn't it? I guess I'd do the same, so you don't need to pass judgment before the execution."

For a minute, Ajub stared at him stupidly, an almost human grin of amusement creeping over his face. "No, Harvey Lane; I stayed to give you directions for finding us if you ever wanted to, again. Here, I've drawn a map of the new route as best I can. Now let me carry you home to your friends before I go back to mine."

He picked Lane up as he might have handled a child, slinging him easily across one huge shoulder and trotting down the trail, his other hand touching the ground as he ran. And slowly the man relaxed, mentally as well as physically, for the first time in days.

"Ajub," he said quietly into the ape's ear, "you've got your directions twisted. According to this map you've drawn, my friends are north of here—a long ways north."

He heard the chief's sudden chuckle, felt the strong old body swing around and head the other way in the same effortless stride that ate up the miles without haste, and then he was sleeping peacefully, his head half-buried in the grayish-red fur beneath him. Ajub smiled widely and moved gently, but the distance shortened between them and home.

THE END.

Gleeps

by P. Schuyler Miller

Gleeps was—Lord only knows what. He or it was curious, though—and utterly unpredictable, and it turned up anywhere as anybody or anything in the star lanes. Sometimes, more or less accidentally, Gleeps could be helpful—

Illustrated by Kramer

It seems there were two Martians, Xnpqrdt and Tdrqpnx. Or maybe it was two Venusians—or even two Irishmen. You know how the thing goes as well as I do.

So these two Martians meet on a street somewhere—let's say it was on Main Street in Plnth—and Tdrqpnx says to Xnpqrdt: "Who was that *zyzystk* I seen you with last night?"

And Xnpqrdt—if it was Xnpqrdt—turns bright pea-green and answers: "That was no *zyzystk*—that was Gleeps."

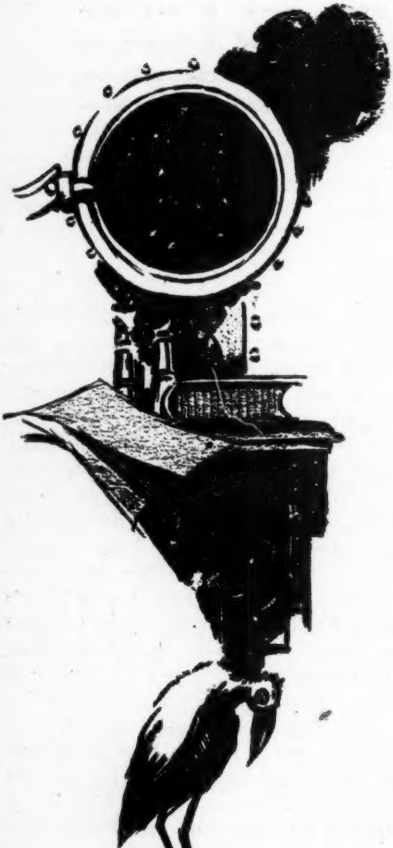
O. K.—I know it's old with whiskers. I know your great-grandfather heard it in a bar on Io the year before the red comet. Probably *his* great-grandfather heard it some other place the year before something else. The fact remains that there are plenty of people who never even heard of Gleeps. As a matter of fact, what do *you* know about him?

Oh, sure—he's common knowledge. Everyone knows Gleeps. He's been in everybody's hair, and there usually wasn't any hair left when he got through. And yet you can travel as far as any warpship will take you in this universe and the next—you can shinny up and down Time like a monkey on a stick, or you can riffle through dimensions like a mail-order catalogue, and you still won't find anyone, man, beast or tensor, who has ever seen him, who has any idea where he comes from, or when, or why. Sure—there are guesses. Anyone can guess. There's been books written about him in places like Mars where they've known about him for a thousand years. Chances are there's been wars fought over him. But Gleeps himself is just—nothing. A name. Bad luck with a personality.

Like anyone else who's ever had to do with him, I have a kind of picture of him in my own mind. I know it's wacky. I know there isn't a jit of truth in it: there can't be. But it's the way Gleeps seems to me.

The way I see him he's a little guy—maybe forty, maybe forty-five—getting a little thin on top, so his scalp shows through. He has a round, wrinkled-up, pinkish kind of face like a worried baby's, with wide blue eyes and a button of a nose. He wears big glasses—the old kind, with earpieces. He don't much more than come up to my shoulder, and I'm not so big. His clothes are always neat and his shoes polished. And he's always grinning—apologetic, sort of. He don't *like* to make trouble for anyone. He's just so damn curious about things!

You look at him, you can tell his whole make-up is one big question mark: the way his eyebrows arch up over his eyes like a pair of hoop bridges—the way his mouth is always a little bit open, ready to ask a question if he wasn't so polite about butting in—the way he's always tensed up on tiptoe, eager about what goes on. Only I guess he don't look anything like that. It's just the way he is in my own mind. I can remember the description a broken-down old cephalopod gave me of him once, out on the Tauroids or some place! It would make you spit green—but it was the same guy. Gleeps.



The way I see it, Gleeps is an investigator. I like that better written with a capital: Investigator. It's almost like he wore a badge—I bet I could go on and describe that, too, like I have him, but it would be all jet-wash. Nobody's ever seen him. Nobody *can* see him, unless maybe it's another of his own kind—if there is another.

Like I said, I figure Gleeps is an Investigator. As far back as you want to go, he always has been, and as far ahead as you want to go in a bender, he always will be. Everywhere you go in this or any other universe he is, was and will be. He's everywhen and everywhere—but I said that before.

I can't make up my mind whether he works for somebody or if he's on his own. I kind of think he's on his own—it fits in better with the picture I have of him—and yet I can't see anyone going to all the trouble he does just to be nosy. The real trouble is, I can't imagine what kind of Who it would be that Gleeps could be working for. It's bad enough trying to figure out Gleeps himself!

The way I see it, Gleeps is like the elephant's child in the old story I heard somewhere, from some old guy, when I was a kid back on Earth. Elephants were gone then, and had been long before my time *or* my grandfather's, but they had some stuffed in museums and pictures in books and like that. I know what an elephant is, which is a lot more than you can say for some other lunks who are horsing around space with an astrogator's card and nothing between the ears but star-sweepings. Anyway, this elephant's child in the story went around asking questions of everybody and about everything until he got his nose pulled out from a button into a regular hawser. He had an insatiable curiosity, the story said. I kind of figure Gleeps *is* an Insatiable Curiosity.

Let me tell you about it.

The way I remember—and it was a long time ago—I was working out of Aldebaran 12 as astrogator on a second-rate bargain-liner with warpers so old their Heisenberg made anything I did pretty much of a joke. You can line a ship up to run according to the way the warp field is laid, and if your uncertainty factor isn't bigger than your variables you can come out pretty close to where you were aiming, but on an old crock like the *Solarian Queen* I might just as well have been figuring odds on a *glinth* race as trying to lay the course. My real job was to figure out where we were when we got there.

The astrogator they'd had came down with appendicitis or the itch or something just before they made port. Maybe he just couldn't take what those broken-down warpers did to all his pretty figures. Anyway, they needed a new man and I was around, so they hired me. I've learned to take things the way they come and not bat my brains out worrying about how they ought to be. If I hadn't, that cruise would have addled my noggin like shirred eggs and no mistake!

I like to know about the people on ships I'm 'gating. It don't make with the figures any, of course, but it gives you something to play with in your head between times. So I upended a handy packing case near the foot of the gangway after I'd signed on and stowed my gear, and settled down to look them over as they came aboard.

Most of the crew had been on ground leave. I'd looked over the skeleton shift they had standing by under the second officer and didn't think much of any of them, one way or the other. The second, Davy, was an old guy—older than me by a lot—and the chances were he couldn't get papers for anything bigger than the *Queen*. He was a sniffer: I could tell by the waxy look to his skin, and the traces of red dust in his sandy, gnawed-looking mustache. Myself, if I was on the way out and had better days to remember and no future to speak of, I'd like to keep myself in a mild *snitt*-haze just to be able to stand what I was doing.

The old man was different. He laid a fishy eye on me when he came aboard, but that was all. I figured I'd get mine later, when I handed him my specifications. The port officials would lay out the rising course for him, and he wouldn't want anything from me until we were in space and ready to go on the warpers.

This Captain Humphreys was a big, sleek-looking man with polish on his fingernails. That don't mean what it used to when I was making my first plot, back before there were warpers. All it told me was that the old man was smelling around in big-money circles where that kind of thing was the same as a clean shirt to me. Take him out of his uniform and he could be a banker. Matter of fact, that uniform was a lot newer and cleaner than anything had a right to be on a scow of the age and general decrepitude of the old *Queen*.

One by one they came straggling along. Some of 'em knew me, some of 'em stopped to pass the time of day just in case I was somebody with an in, and the rest slogged by like they were pallbearers at their own wedding. I began to figure a little about what it was going to be like aboard the *Queen*.

The passengers came aboard all together with the first officer. There were eight of 'em—which is all a leaky bathtub like the *Solarian Queen* can handle—and they gave me something more to figure on. Leastways, three of 'em did—three and the first.

There was nothing unusual about the other five. They were just about what you'd expect on a cut-rate cruise: two old-maid schoolteachers who'd given up their last hope of ever getting themselves a man, but were still going through the motions—one he old-maid ditto—and a couple on their second honeymoon. One of the teachers—the one with the wig—was Miss Sammons, and her girl friend was Miss Abernathy. The professor had a name to go with his nose glasses and high collar: Florenzo. The old couple were the Bascoms—they were just taking things as they came and having a grand time. I made up my mind I'd stop around sometime and spin a yarn or two I figured they might like to hear.

Two of the other three were women, and they weren't schoolteachers. I wasn't ready right then to say what they might be. Thing that was dead certain was that they didn't belong on the *Queen* any more than the captain did—or the first.

The one was blond; the other was a brunette. The blonde was quite a bit older—I wouldn't want to say how much older, even with the experience I've had, because you can't tell about blondes in the first place and because there'd been a lot of money spent by someone on her face and figure. I will admit they got their money's worth, whoever they were.

The brunette was a lot younger, although with the stuff she had covering up her face you had to look twice to know it. I didn't mind looking. She had a kind of small nose and big eyes and the look to her that means she was born with money in her veins instead of blood. Looked to me like she'd had a transfusion sometime, though, because it wasn't money that was steaming over the first.

He didn't fit the set-up any better than the two mantraps. He wasn't much older than the young one. He was big and red-headed, and had a spaceburn thick enough so's it could have been laid on with a calker's knife. Whichever way you figured him it came out wrong. Any man who didn't rate a better berth than the *Queen* at his age was too dumb to have a first's papers. Likewise, any cub fresh out of training school, the way he pretty surely was, would be placed in one of the big lines. It didn't figure.

Out of the three, he was the only one who laid an eye on me. It was a hard blue eye, and I told myself then that whatever reason he had for shipping on this crate was good.

I started aboard after them when I saw the crawling cadaver who was hobbling up the plank. When a Martian gets old you know it. His hide wrinkles up like the flesh had been drained out from in under and begins to fray at the folds. His nice spinach-green complexion turns sort of moldy and the bags under his eyes slop down until you could sling cargo with 'em. He gets sand in his joints and walks like an arthritic crab. And old Foozy was as old as they get.

What's it matter what his real name was? I can't spell it and you couldn't pronounce it. When he was chief cook for the Planets line we called him Foozy for some reason or other and it stuck. Even then he was the damnedest, mangiest, scrawniest string of dried-up rock tripe you could want to see. But he could cook! Martians are born with a skillet in their fist, and old Foozy was king of 'em all. Planets was a luxury line, and it had passengers who came aboard to eat Foozy's cooking and didn't leave the table until the liner docked again back on Earth.

We saw each other at the same time. His ugly face split wide open and he began to cackle like a hen that's laid an ostrich egg. I hit him a clip on the back that nearly stove in his scrawny old ribs and grabbed him by the hand.

Right then I knew he was riding high, because he was wearing *zint*-skin gloves. *Zints* have been extinct on Mars for twenty-thirty thousand years, and there likely aren't more than a dozen pairs of *zint*-skin gloves in space. They came out of kings' tombs and such. And Foozy was wearing one of the dozen.

So I was astrogator of the *Queen*. So I was supposed to get out my tables and my calculator and give the old man a sheet of figures to fiddle with when he managed to get us off the ground. Sure that's what I was hired for. But it was all of fifteen years since I'd laid eyes on Foozy or he on me. Maybe sixteen. So we went down to his coop and split a bottle for old times.

Me, I never heard the buzzer when we blasted off. Neither did he, far's I know. We were singing about that time. All of a sudden I was on my back under the bunk, with Foozy and a mess of bottles piled up on me, and five-six G's jamming rivets into my epidermis. When it tapered off so I could stand up and sling Foozy into the bunk, it was time for me to have my figures ready. Only I didn't.

I had a pretty good story ready by the time I got to the control room. I disremember now what it was. Anyway, with the help of what had been in Foozy's bottle, I'd worked things around so I was pretty sore about the way they were treating me. I was all set to give the old man hell and no mistake. I'd stood for all I was going to from him, which was pretty good seeing I hadn't reported to him yet. I slapped open the door to the control room, tripped over the sill and went flat on my face at his feet.

Like I said, Captain Humphreys was a big man. He used just one hand in my collar to pick me up. The two wenches were standing there taking the whole thing in, and it riled my dignity a mite to be dangling there in his fist like a bunch of carrots or such. Then he set me down, so hard it jarred my back teeth loose. For the time being I couldn't get started on any of the things I had figured out. Nor I didn't get the chance.

Humphreys had a voice like a banker—soft and slippery like a swipe in the face with wet rawhide. I was glad there were ladies present so's he wouldn't feel free to let himself go.

"You crawling, drunken old sump-rat," he started in, "if you come into my control room in that condition again I'll take your *spodlak*-soaked liver out by the roots and fry it in your greasy brains! What do you mean by handing me a sheet like that? What am I supposed to do with it? Read it, you molting worm!"

He shoved a fistful of paper under my nose. I eased back enough so's I could focus on it. It looked familiar, kind of. Then it dawned on me that it was in my own handwriting.

On a tub like the *Solarian Queen* you can put all the figures you've got any need for on one sheet. You give the captain a couple or three reasonable sounding settings, he feeds 'em into the integrator, and you go into a warp. After a while you come out again. If you're lucky, you're in the right galaxy. If you're extra lucky, you're in the right system. So you figure where you are and try again.

Any equation that gets beyond the third order don't make sense in a junk shop like that. You can figure 'em, but the warpers can't handle 'em. This thing he was shoving at me ran to seven orders and five pages. There were terms in it I'd never heard of. I got my teeth settled in my mouth and told him so. That was a mistake.

"Why, you wriggling nematode," he told me, "you walked in here three minutes ago and handed me this thing. Then you drizzled out under the door like the bilge wash you are without so much as a salute."

"He didn't use the door, Captain Humphreys." It was the little brunette being bright and shining. She was looking at me like I was something in a zoo or a museum. "He disappeared."

Well, the captain looked at her, and she stared at me, and I stared at all of 'em. I didn't like what I saw in the blonde's eyes. It was a lot more respect than I want any blonde to have for me. I began to wonder about things.

"What do you mean, Miss Beaulieu?" the old man demanded.

Her jaw set. She was younger than I'd thought, and she didn't like being contradicted. "What I said!" she snapped. "He disappeared. Like that!" She snapped her fingers in midair.

I gave her a sour look. When I feel the way I did then, other people disappear; I don't. I said so. She didn't take it well.

"Don't be impertinent," she told me. "I saw you. Miss Mason saw you. We all saw you. Didn't we?"

I looked at the blonde again. If she was Karen Mason, little boys were told about her when they went to college. It never did any good. I could see why.

"I'm sure I can't say what you saw, Anastasia dear," she drawled. It was good and nasty. "You know best what it seemed to be."

Anastasia clammed up then and there, and high time it was, too. She wasn't letting any blonde make her out a two-seer. Also, the whole thing was going over the captain's head, and he didn't like that at all. He glowered at me and I beat him to the shout. I opened my eyes as wide as I could and made the figures stand still on the paper for a moment. They looked sort of odd, but reasonable. I shoved the thing back at him.

"What's the matter?" I asked him. "Can't you read it? I laid it out for you—now you run it."

I turned around on one heel and reached for the doorknob. It was a couple of inches too far away and I kept right on going around. I spun twice on my left heel, like a top, and sat down hard on the floor.

Anastasia Beaulieu guffawed. "Disappear again," she urged brutally. "I liked it."

Then, for the first time on that nightmare junket, I was saved by the gong. I was wondering whether the captain was going to kick my ribs in while I was down, or knock me down again after I got up, when the door opened and Foozy wandered in.

I never saw a Martian sober so fast. The way he was when I left him I thought he'd be out cold until we docked. Ordinarily, alcohol pickles Martians the way it would a beet. Does something to their chlorophyll. Foozy looked as fresh as a stick of celery. He was walking sprier and straighter than when he came aboard. The captain took one look at him and smiled all over his face. The two dames wriggled their shapes straight and began to gather round. All for one desiccated ex-space cook old enough to remember Mrs. Roosevelt!

"What isss it, Captain Humfreeesss?" he asked in that steam-whistle voice of his. "What isss happening to my ffffriend, Missster Jonessss?"

"Mr. Jones slipped." The captain lied with as straight and smug a face as I've ever seen. Meanwhile I was climbing hand over hand up the leg of the table. "We were discussing his calculations for our course."

Foozy looked at me. There was a funny expression in his eyes, like he had never seen me before. "What isss wrong with the galgulationsss, my fffriend Missster Jonesss?" he inquired politely.

I was on my feet again, and my honor as an astrogator was bruised. I gave them all a glare and draped my arm around Foozy's bony neck. "Nothing's wrong with 'em!" I told him. "Captain can't read 'em, is it my worry? For you I'll set 'em up myself!"

My head was going around like a gyro-wheel, but I got to the integrator all right, snatching the paper out of the captain's hand as I went past. It still looked queer, but I punched the field equations and reached for the switch. Immediately the expanse of stars outside our port blanked out and there was that screwing, stretching feeling that means the ship is being poked through a hole in nowhere to come out a couple thousand light years away on the other side.

I don't know now whether I saw what I saw, but I think so. They were all looking at me, and I was looking at Foozy. And he disappeared. Where he had been standing was one of those cockeyed little birds like a ruffled-up pine cone with a Roman nose and pipe-cleaner legs, staring at me out of one beady eye.

So I passed out.

I had me a dream. They were all playing a game, running around and around in a circle with me in the middle, getting dizzier with every round. Anastasia was chasing the first officer and the first was after the blonde. The blonde was chasing the captain. I couldn't see who he was chasing, but Foozy and that cockeyed little bird were hopping back and forth on the side lines cackling some crazy tune. I couldn't stand it, so I woke up.

Someone was shaking me. It was the blonde, Karen Mason. She wasn't wearing anything to speak of, and I wouldn't be one to talk under those circumstances. I tried to give her a friendly welcome, but she side-stepped it. Then I saw that she had a gun in her hand.

"How'd you do it, Jonesy?" she asked.

I hadn't done anything I could remember. "Do what?" I asked her, just to keep the ball rolling.

She smiled. It wasn't the kind of smile she'd been giving the first and the captain. It made my scalp crawl.

"You know what," she said, oh very sweetly, but with icicles. "You and that Martian. Only he's boiled too hard to tell me. You disappeared, and you're going to tell little Karen how you did it."

I remembered the nasty little glint I'd seen in her eye when Anastasia was talking all that guff about disappearing. It didn't help any to know that she had seen me disappear, too. I began to wonder where a guy like me went when he disappeared.

For the second time the gong rang with me hanging on the ropes. This time it went off like the howl of a skinned wolf. It went on and on like a siren with the hiccups. People began yelling and doors slammed and feet began pounding up and down the alley. I pushed the blonde in the middle—hard—and snatched open the door.

It was Davy, the second officer. He came bouncing down the alley like the ball in a game of comet pool. Tears were streaming down his face and both hands were clapped over his nose. He shot out into the passenger lounge, nearly knocking over the skinniest of the schoolteachers, dived into the carpet and began rooting up the pattern like a Membraso boar.

There was a head in every doorway. Most of 'em were watching Davy, but Anastasia was looking at me—and past me at the undressed blonde. Sparks spit out of her black eyes and she slammed her door. It didn't slam very hard so she opened it and slammed it again.

The old maids—all three of 'em—were trying to separate Davy from the carpet. Foozy wasn't visible; I remembered the blonde said he was still stiff. But what ailed the second had happened in his cell, so I went there with the Mason right after me.

Prentiss, the first officer, was ahead of us. I looked under his arm into the cabin. I told you Davy was a sniffer. There was *snitt* all over the place. It was strewn over the top of the table and floating in the air like red smoke. The color didn't look right to me. I dabbed some up on my finger and stuck it in my mouth.

It was like licking fire. I let out one howl that beat Davy's best. I opened my mouth and stuck out my tongue and tried to fan it with both hands. Then over the end of my nose I saw something that propped my jaw wide open and left it sagging.

The *snitt* was gathering itself together in a neat little pile in the middle of Davy's table, like a flicker strip running backward. Down the corridor the second stopped yelping, and I suddenly discovered the fire had gone out of my tongue. Then the stuff wasn't there. There was a book instead—a small red book. Prentiss picked it up and opened it. The pages were blank. He closed it and his square jaw drooped.

"Space almighty!" he whispered. *"Gleeps!"*

To me that was double-talk. Likewise to the blonde. She pushed past me and took the book out of his hand. She still wasn't wearing enough and it worried me where she could have put the gun. She riffled through the pages. There was printing on them now!

I saw the first slowly turning red under the tan. He flung a look at me hard enough to split a jet lining. "Go get your Martian pal," he snarled. "I want to have a talk with him."

"Why don't you talk to Miss Mason?" It was the little brunette, Anastasia Beaulieu, and she was being so sweet it hurt. "I'm sure she will be much more entertaining."

He stared at her. She was using the doorway for a frame, and she was wearing just a little more than the Mason dame. I wondered if maybe they were trying to outstrip each other. I sort of wanted to be around for the finale.

The first began to suck air like a drowning fish. His face was pretty near the color of his hair and his neck was even redder. Then he clamped his jaw down hard and strode at her with fire in his eye. She moved. He slammed up the alley into the control room.

I know when I'm not wanted. I went out into the lounge and began to spin yarns with the old people, and pretty soon I had a quiet and appreciative audience except for Professor Florenzo, who sat over in the corner making clicking noises as though his teeth were loose or he didn't believe me. The Mason ginch ducked into her cabin with the book under one arm, and came out a few minutes later with more clothes on and no book. She headed up the alley toward the control room.

A little later I noticed the bird was there again, standing spraddle-legged on the carpet, looking up at us with its head on one side, like an old man with his hands behind his back. First it would look at me, and then it would use the other eye to ogle Anastasia. She hadn't bothered to change. She was hunched up in the corner opposite the professor with her feet tucked under her, glowering. One of the old maids went over and tried to make conversation, but it didn't make. She wanted to glower.

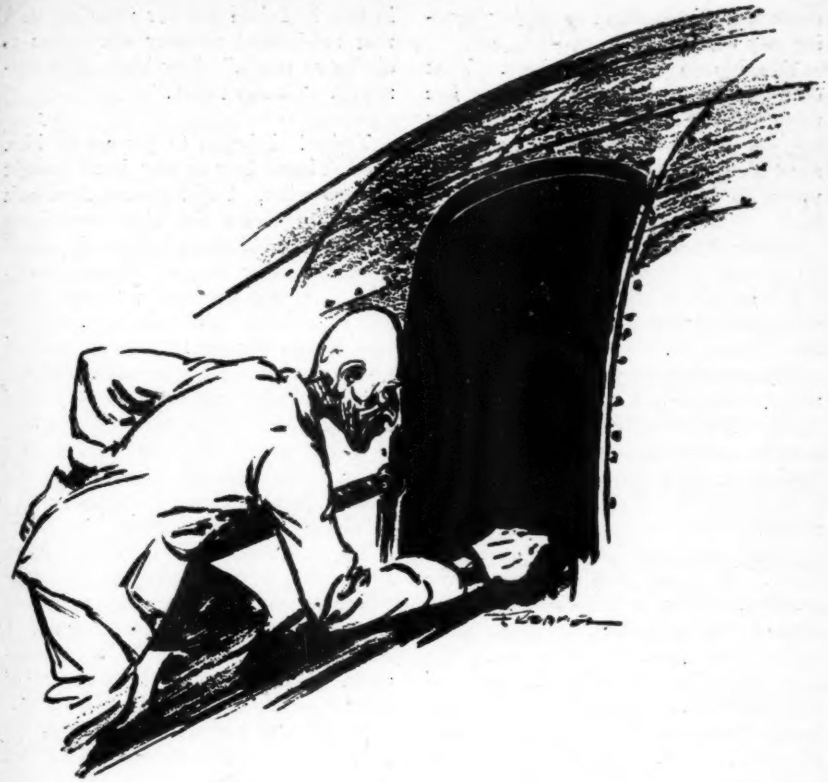
We were still in the warp. I didn't know how long I'd been off the log, and I couldn't remember any of the figures I was supposed to have set up, but it seemed to me that we'd been in a long time. I figured that might be what was wrong with Anastasia's temper. Some people get peevish in a warp.

I was wondering about Foozy, too. If the first wanted him, it might be smart to wake him up and chew some fat first. I gave my public the brush-off and started for his coop just as Mason and the first came ambling down the alley, arm in arm.

The first looked across the lounge at Anastasia, and she looked back at him. He looked miserable and she looked murder. Then the blonde tugged him gently toward the door of her cabin and the two of them slid inside. And Anastasia began to bawl.

Foozy could wait. I grabbed the nearest bottle and applied first aid.

She was mad enough to talk, but



she didn't have anything to say. If I'd been around Earth more, I'd have known right off that Anastasia Beaulieu was the latest glamour queen of the System. What she didn't have, on hand or on call, no one had a right to. She was making time with our first, young Prentiss, when he suddenly threw up a good job and signed on the *Queen*. When she found that Karen Mason was on the passenger list, she bought a ticket herself.

That was all there was to it. Girl meets boy. Girl chases boy. Girl don't get boy. Girl gets mad. It didn't contribute anything to the screwy stuff that was going on, so I started for Foozy's door again. This time the gong caught me with my back turned.

Did I say gong? It sounded like a geyser with stomach ulcers. It was the old man. The control-room alley concentrated his bellow and shot it out into the lounge in a blast that parted my side whiskers.

"JONES!"

He wanted me. He wanted me bad enough to come halfway to meet me. He put his arm around my shoulder and gave me the smile of a wolf who's admiring a thick steak. That was for the passengers. With a solid steel door between us and them he spoke his mind.

"Jones," he said—although in somewhat different words—"where in the Galaxy are we going?"

That kind of question didn't make sense. If he didn't know where we were going, he couldn't have given me the co-ordinates of our destination, and I couldn't have figured the warp fields which were taking us there. Come to think of it, I still didn't remember figuring any warp fields.

The Mason babe was there. That didn't make sense either, because five minutes before she'd crowded the first into her cabin. She handed me a course sheet that looked like the one I'd set up on the board a couple of generations back.

"Look it over, Jonesy," she said. "You gave it to us. Remember?"

I took it. It still looked queer, and this time I knew why. It was figured for a full cycle.

The mathematics you use to calculate a warp course is a very tricky kind of thing. The functions repeat and you have to use them within certain limits. This sheet used the whole works.

I told them. I didn't like their reaction.

"Can't we stop?" Mason wanted to know. The old man told her. We couldn't. When a warp field has been created, you can't break it without being kicked into Lord knows where. We were off on a nonstop trip around the circumference of space-time. It might take a lifetime or it might take a couple of hours. It already *had* taken a lot more than a couple of hours.

I looked over the sheet again. There was a chance that with a little figuring I could get an idea of how long we'd be in. Captain Humphreys didn't take to the idea. He grabbed the sheet out of my fist so fast it singed me.

"You've done enough figuring," he shouted. He didn't sound much like a banker now, unless it was one whose bank has busted. "I'll give it to Prentiss."

"You'll give nothing to Prentiss!" the blonde told him. "I don't trust that red-headed valve monkey! What's he doing on a broken-down rowboat like this, anyway?"

"Yes, captain. What *is* he doing here?" It was Anastasia again. Her nose was still a little red, but she was madder than she was anything else. "And how did this blond space-cat get in here? I just left her noodling with that red-headed monkey she seems to dislike so much." Her black eyes narrowed. "Is she twins?"

Twins! I began to get me an idea. I didn't know how or why, but I thought I knew what. I slid around Anastasia and went down the alley one jump ahead of the old man's bellow. I yanked open the door of the Mason dame's cabin. I saw the first with his arms full of a lot of high-order curves. It was Karen Mason all right. Then it was Anastasia. Then it was empty air.

He unfolded his arms from around nothing. He had the unmistakable look of a fool on his face. He had a right to it. He reached blindly for the blonde's bunk and sat down hard.

"G-g-gleeps!" he gasped.

The red book that Mason had taken from Davy's cabin was on the floor where he had been standing. I picked it up. The pages were blank again. I closed it and opened it. It was a cookbook. I tried again. It was full of feelthy pictures.

Gleeps was getting rattled. But did I know that then? How could I? I'd never heard of Gleeps.

I slammed the book into the corner and wabbled out into the lounge where the bottled goods were. The lights were down. The Board of Education had gotten tired of sitting around counting its fingers and gone to bed. I flicked them on. Professor Florenzo was draped artistically across a big chair with a neat burnt hole right in the middle of his vest.

Now we had us a corpse. O. K. Corpses were something you could lay your hands on—if you wanted to. Corpses weren't blondes that turned into brunettes that evaporated into colorless, odorless, tasteless gases. Corpses weren't recipes for *spolluk* fritters that turned into an overexposed picture of an overdeveloped hussy with wisecracks painted on her periphery. Corpses weren't route sheets that turned into round-trip tickets to nowhere. I grabbed me a handful of this one and yelled—loud. And long.

By now they were used to coming on call. In a flash they were all there. The Mason. Anastasia. The first. Davy. The old man. The schoolteachers. The Bascoms. And the corpse. Everyone but Foozy. And the bird.

One of the teachers saw the burnt circle on Florenzo's vest. Her pop eyes popped more. *"Oooooo,"* she squealed. "Death rays!"

Death rays my toupee! There was a gun on the floor by the corpse's right hand. The burnt circle was powder—and a cheaper, cornier brand of traders' gyp junk than I'd seen since I was selling the stuff myself. It was just the kind of stuff some backwoods brainstormer would buy at the corner exchange to protect himself from wolves and cardsharps on a trip like this. So let it *be* suicide. It was swell. It was tangible. It ticked. Only the blonde didn't like it.

Did I say she had blue eyes? They were like Sirius now—hot and cold and plenty hard. Her voice started high and it went higher.

She swung on the old man and raked her fingernails all the way down the right side of his face. Her spare fist went into his banker's bulge and her toe put a dent in his shin.

"You weasel!" she yelled. "You bilge beetle! You double-crossing this and that!" She followed that line of thought to its logical conclusion and wound up with a right to the jaw that folded our captain up like a well-worn bank roll. Then she reached for Davy. The little man took off, with her after him. It was like the dream I'd had.

"You did this!" she was screaming. "You and that double-dealing Humphreys. You made the old fossil talk and then blasted him. You were going to cut me out. Well I'll cut *you* out. I'll cut your blazing innards out and shove 'em down your scrawny throat!"

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Then a lot happened. Her foot hit the gun and they went skidding across the floor together, tangled with the teachers, and wound up in a heap. Davy went through the hole where the teachers had been and on down the line to the crew's quarters. The first and I reached for the gun together and Humphreys reached past our noses and got it first.

And then—and there—the corpse went out.

This time it happened slowly. Gleeps was still a bit confused. He was having a swell time, but he couldn't make up his mind. One minute the corpse was there, and all of us milling around it. Then it started to fade. It got hazy and you could see the carpet through it. Then it started back and got solid again. It flickered like a candle that's used up its air. The third time round it went out for good. And Humphreys dropped the gun.

It sounded like a ton weight hitting the floor. I scooped at it and it threw me. It *was* a ton weight. Then Anastasia stepped over me and picked it up like a feather. *Zip—zip*—and she'd tossed it to the first. More zips and the old man was on top of him, one hand clawing at the gun, the other fastened on his throat. I hauled back one foot to settle that—and Mason stepped back into the ring.

I don't know now where she kept that gun unless she had a hollow leg. There wasn't enough covering her at any time to hide it. But she had it, and it was pointing at my breakfast.

"Let 'em fight," she said. "I want to see this."

Prentiss had the gun—but Humphreys had the weight. The first had height and youth—but the captain was hard as nails under the plush trimming. With Karen Mason's gun calling the numbers, what could I do? What could any of us do? What Anastasia did.

She kicked. It was a beautiful kick. It was a beautiful leg, and she used it all. She aimed at Humphreys' ear—and she hit the gun. It went slithering across the room, under all our feet, just as Prentiss hoisted the old man over his head and let him fly.

They came to their feet together. Humphreys snatched the gun out of the blonde's hand and Prentiss gathered up the other on the run. They pressed the triggers together, just as I hit the captain northwest of the knees. His shot spanged twice around the room and went singing down the alley. But the first's gun spat blue fire.

It snapped past my ear like condenser drip. I felt the heat from it. I smelled hair burning. And I smelled roast meat. The hair was mine. The sirloin was Captain Humphreys.

And First Officer Prentiss had a cockeyed little bird in his hand.

The scene needed a blackout. It got it. A door opened. There were Foozy and the professor, arm in arm, staring at us in mild surprise. Foozy cleared his throat.

"What isss happening?" he piped. "What isss wrong with Gaptain Humfreeessss?"

Let me put it all together for you. Florenzo invents a workable ray gun. He's the kind of moth-eaten worm who would. Foozy, the Martian millionaire, is going to finance the thing and give it to the Patrol as a noble gesture. But Foozy is no pinhead, so they arrange to get together on some broken-down Cook's tour and make the deal.

Neither is Humphreys a pinhead. What he would do with a property like Florenzo's ray is *not* philanthropy. He picks the Mason blonde to help him—Florenzo is supposed to go for blondes, and I know Foozy does, the moss-covered old fungus! A couple of dollars where they'll do good, and the *Queen* is theirs. *But* the Patrol is no dumber than all the other parties to this little merry-go-round, and they plant Prentiss as first—presumably after the blonde.

Nobody figured that Anastasia would take after the first. And nobody at all figured on Gleeps.

I told you about Gleeps at the start. He's an Investigator—in capitals. He's Insatiable Curiosity. He's a nuisance. Nobody knows what he is. Nobody knows what he looks like.

Because he can look like anything.

Put it another way—the way I think Gleeps puts it. You want to soak up all the information you possibly can about a set-up. You want to sit around unobserved and snoop. You want to look at things from as many different points of view as you can. So if you're Gleeps you *are* those points of view.

I don't know what he was when he went aboard. Maybe he was Foozy's gloves. Maybe he was a silver jit in somebody's pants pocket. Maybe he was a pattern of air molecules. But while Foozy and I are comparing notes and matching drinks in his cabin, he makes himself into a reasonable facsimile of me and starts observing. What better way to find out what goes on when a lot of wacky human beings lock themselves into a steel vault and go skyhooting through space?

This Gleeps is a very conscientious guy until he gets rattled. He's me. I'm astrogator. So when the old man asks him for the ship's course, what can he do but produce? He don't know astrogating from nothing, but he's me—he's got my brain and my handwriting. So he writes 'em a course. Since he's an amateur, he makes a couple of perfectly natural errors.

Did I say Humphreys and the Mason babe were after the prof's ray? They were, but they didn't know it was a ray. When Mason saw Gleeps disappear she thought it was a vanishing act. She thought Foozy, as my old-time pal, had cut me in on the deal, and that the deal was something like invisibility or a pocket warper that would whisk you out of here and set you down there in no time flat. She set out to "contact" me.

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AT ALL NEWSSTANDS

Meanwhile our pal Gleeps, wriggling with curiosity about what's happening in this very interesting situation he's stirred up, picks up his courage and walks in again—as Foozy. Foozy's out for the duration, dead drunk. He *can't* ball up the impersonation. So this time he uses Foozy's shape.

Act Two—he's Foozy. He starts observing again. Climax. I throw us into the warp. Something goes wrong with his control. And he's a zubzub-bird. Anastasia, as a matter of fact, insists he was always a zubzub-bird. She thinks that's his real shape. Me, I know zubzub-birds.

That's how the whole thing went. The plot was proceeding as per schedule, with the little matter of Anastasia's temperament and Gleeps' curiosity mixing it up from time to time. Davy was in the plot. Gleeps started to observe Davy as a pinch of imitation *snitt*. And Davy sniffed him. Curtain, Act Three. He gathers himself together and becomes a book. He's never done much reading, so the book is blank inside. He senses from the first's reaction that blank books don't make sense, so he prints something on his pages. He's had Foozy's brain a couple of changes back, and Foozy is a cook. He becomes a cookbook. That's when Prentiss catches on. They're warned about Gleeps in the Patrol.

Along about now Gleeps and his switches are really beginning to gum up the works for Mason and the captain. Naturally they figure what's happening has to make sense. Then try to figure it out. They start to investigate. Gleeps has lost interest by now, and he's turned back into that cockeyed bird and is taking in the most interesting thing he can find—me and my yarns. Intermission.

Somewhere along in here Karen Mason started to work again on the first. Gleeps sensed that he might learn a lot by observing what went. The way he reasoned it, he'd learn still more by *being* the blonde. So he was. And he did!

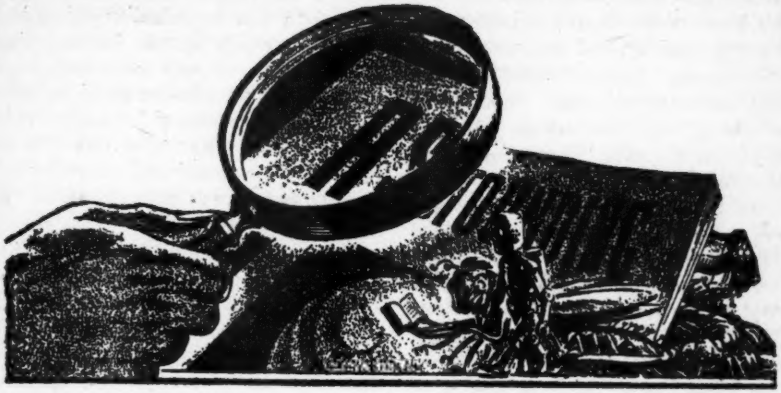
Believe me, he put his heart and soul into that transformation. He learned—and fast—what blondes were for. When we caught him in the act, he got embarrassed. He tried to cover up for Prentiss *and* himself. He became Anastasia, and that was no better, what with her standing in the door staring at herself. He tried the book again. Then he just gave up trying. He wanted it quiet. He became a corpse. What could be quieter than a corpse?

This Gleeps is a painstaking little soul. He hadn't been around for quite awhile, or he'd been a detective story in some former change, or something. He supplied powder burns on his vest, although powder burns are centuries out of date. He even supplied the gun. When the Mason dame jumped to conclusions and people started trampling on him, he quit being a nice quiet corpse. At least, he erased that part of himself and stuffed himself completely into the gun. He forgot to change his weight and the old man dropped it. He corrected his mistake and Anastasia picked it up. You can follow it from there. During the first part of the fight he had forgotten to load himself—praise be. When he did become the real thing, it was the ray gun that he'd learned about while he was the professor's corpse. Curtain—for Humphreys.

Right about then, I think, Gleeps got fed up with the whole crazy business. One minute he was a bird, squeezed into Prentiss' fist like the gun butt he'd just been. The next minute the bird was gone. And whether he coasted back to Aldebaran 12 with us as a flyspeck on the ceiling or a curlicue of black lace on Anastasia's whiffnits, I don't know. Maybe he stayed with the blonde. I know what I'd have done—but I'm not Gleeps.

Or am I?

THE END.



Brass Tacks

"Thar's gold in them hills!"

Dear Mr. Campbell:

It is with sincere pleasure that I break the silence I have kept since I last saw you, on January 3rd of last year.

The reason is a good one, for I have just read "Mimsy Were the Borogoves," by Lewis Padgett. I doubt whether every phase of its appeal can be given a cut-and-dried analysis, even in your Analytical Laboratory, and I am not going to try to do so. But because of the great success of the last story which dealt quite a bit with children, "Beyond This Horizon" I think it was, I am convinced that cinema producers have been aware of something I am only beginning to realize—that children are a basic sort of enjoyment to most matured adults, regardless of the role they are given to play.

Because I believe that you will acknowledge this fact, and because your appeal for new authors has been apparently based on Lewis Padgett's masterpiece—for who could not boast, in saying of him, "See what I have done to hold our magazine together"?—I am writing to you to suggest that you get or help Mr. Padgett to write a sequel to "Mimsy Were the Borogoves," with a logical extension of Lewis Carroll's rhyme as the basis for the theme—if it *is* logical.

For instance, "Beware the Jabberwock, my son"—is that sinister or not? What is the Jujub tree, and the frumious bandersnatch—is it sinister or friendly? And in the last verse, the boy returns—with the Jabberwock's head. Sinister or not, mysterious or just plain incomprehensible, the Jabberwock *could* be vanquished. I'll bet Mr. Padgett could do wonders with the third verse—please don't let him stop at the first.—Robert C. Lee-Hanna, 1234 Massachusetts Avenue, N. W., Washington, D. C.

Maybe because that was my pen name.

Dear Editor:

This is a rather belated review of the April issue of Astounding Science-Fiction. The "Weapon Makers" wins my vote as the best *story* of the month.

The best item in the magazine is Willy Ley's fine article. Ley's articles really are appreciated by me!

"Swimming Lesson" and "Open Secret" were next in line. Both were good, though not outstanding. "Abdication" followed, with "Escape" trailing.

In Probability Zero, I would say that the best item was the amusing "Double, Double, Toil and Trouble." "Miraculous Fluid" was second, with "A Snitch in Time" a staggering third. My pet "hate" among all the authors in science-fictiondom, Henry Kuttner, pulled another blooper in writing "Corpus Delicti" which seemed to me to be a steal from "Time Locker."

I read, and enjoyed, "Rocket to the Morgue," which was reviewed in a recent issue. Most of the characters were easily recognizable, but what was the idea in calling you Don Stuart? I won't mind the reverting to the smaller magazine; after all, it is the contents that counts.—Frank Hobby, 133 Noe Street, San Francisco, California.

With tubes installed, a sub ought to cruise space fairly well!

Sir:

Well, well! Foul my jets and call it carbon! Boy! Did that May issue of the old Astounding sure look good; darn near like the old style that I had been used to years ago; an old friend returneth. My "congrats" to Timmins on the cover—sure was a nice piece of work. The "mag" is just nice and gives me the right time between classes for relaxation —I am an instructor here in the gun power-electric-hydraulic-control. Asked, casuallike, among the boys in the present class of how many read the science-fiction series; found that over forty percent read Astounding; didn't know I had so many coreaders.

I can remember when I was in the submarine service and used to lay down off of Kiska and read all the back issues —used to wonder whether being in a sub was anything like the future "ships" would be like. Kinda guess they would at that; they would need all of the space they could get ahold of for fuel, oxygen, et cetera, and leave very little for the crews. Put tubes in place of the old Diesels and screws and you would almost have a spaceship.

Been in the naval service for twelve years and can remember reading Astounding for very nearly as long. It seemed as though we both "joined" at nearly the same time. Am a gunner's mate first class now and expect to be chief some time this month. Seems as though the old "mag" got the "rate" before I did.

Hope that the "form" is kept after the war, as it is a lot easier to handle and carry around in the pocket.—Samuel George Richter.

Small, select company—

Dear Mr. Campbell:

It is indeed strange—and understandable—how the opinions and preferences of the fan change during these times of upheaval. The old attitudes toward stfmags are gone. The paramount themes are gone. The fan mechanism has changed from that sheltered air of preservation and artistic critique of the pulp offering, to a harsh and even cruel evaluation of the author, the editor and artist. There is no time for generous and casual appraisal of inferior work in a theater of war where reading is a luxury and magazines of this nature are practically unobtainable. If a thing is poor it is bad and the author is not even recognized as an ineffectual storyteller.

My practice in peace time was to preserve my copies of Astounding and *Unknown* with maniacal care and tenderness—practically bordering on the absurd, as I can see now. It is impossible to store even four magazines a month in a footlocker, so I have been pushed to the point—horror of horrors—of unfastening the book and keeping only those stories that make an impression. I pass on the remainder refastened to the day room and let all who will take a step in the right direction; and I lend my manuscripts to friends who have already taken that step.

An issue that could remain intact after a sample of this new routine must really be something; "Mimsy Were the Borogoves," "Man in the Moon," and the two serials accomplished that feat for their issue—it was really superior with only one blank. The covers are good by this new man and the pix still float along in old, bad fashion. I also saved "No Graven Image," "The Hat Trick," Bok's poem and the editorials, and was rather shocked to omit "Wet Magic" and "The Witch" from my new portfolio. Speaking of the master—Bok, of course—I should like to enter one more vote for his recent novel, an item not in his usual and best style, but mighty acceptable—even if it did not fit the mood of the mag. And his illustrations should prove to you that here is an artist who works to the meaning of the mag; why not drop the barrier and let Hannes in—and let the majority of the others out.—C. Hidley.

Science-fiction under difficulties.

Dear Mr. Campbell:

This letter is taking a lot on trust, I know. Maybe you no longer hold the old office, maybe there is not even a magazine, but still, here is a word of greeting from England for you. That and a request that you would slip in ASF a note that any of the old gang, especially SFA members who get posted in or near Westminster, will be very welcome if they get in touch with me.

When taking part in "the next war," one finds little time for relaxation, and, in any case, the only new mags that we see are the slashed British editions which Atlas produces now and then. For which much thanks.

"Barrier" I remember as a good idea, but do I miss the serials!

Remember our old squabbles over the "purpose of SF"? Personally I am sure that all that racket, stories, discussions, howls—even the Mitchelists, *have* had some value. They helped to give me an idea of what the world could be like, and even of how to change society to achieve that state.

You may have noticed that in our own mad way we are starting doing things over here already. As you were so fond of saying in editorials, SF is steadily becoming fact.

Yours for Union Now and damnation to all Huns of all colors.—Harold T. Kay (S. F. A. librarian), Westminster Hospital Students' Union, Horseferry Road, S. W. I., England.

Richardson simply treated the energy needed to escape Earth as a constant—no matter where you're going or how, that's always there. It's the other, and variable factors that are of interest.

Dear Mr. Campbell:

Astounding deserves the laurel for printing the Richardson article; on the whole, I think it is one of the most interesting—and valuable—you have printed.

However, there are a number of points that ought to be cleared up.

In the first part, Dr. Richardson states that the Paris Gun was theoretically capable of firing its shell to Mars—how? Of course, if Earth's gravity is entirely neglected, it can be said that the extra orbital velocity given the shell—if fired at just the right time—would be sufficient for centrifugal force to shove it into the larger orbit of Mars. Unfortunately we still have a gravitational field—otherwise we could *jump* to the other planets, if the time were just so.

Dr. Richardson has similarly ignored escape velocity in the calculation of his orbits, too. Perhaps a qualifying statement is the one to the effect that space flight may be a hundred or a thousand years in the future, when we may assume some application of atomic power to spacial drives. Then the ship could float leisurely out from a planet, for there would be plenty of power to spare, but that's rather far in the future, I'm afraid. We had better stick to the more primitive methods of attaining the velocity of approximately seven mps and coasting on out.

One bright spot in the calculations is the comparatively low speeds needed for the various orbits—adding to them the escape velocity, we should be able to forget about the tedious "A" or 180° orbits.

Outside of this, I, at least, can find nothing further to criticize in the article. Dr. Richardson has performed a great service for astronautics in general with his outlining of practical navigation methods. The B. I. S. has done some work in this line—they state that the navigational instruments are simple and have even been built—but I don't believe anything approaching the completeness of Dr. Richardson's article has been done before. Especially in regard to his picture of the Solar System.—Keith Buchanan, Box 148, Amsterdam, Ohio.

So far, I've been told of yarns planned for "as soon as I get home again" by Heinlein, de Camp, Asimov, Hubbard, Williamson, Kuttner, Padgett, MacDonald and others. We should have some super issues—

Dear Mr. Campbell:

A note to console you on the magazine's change from majestic to modest measurements—the new format still has all the admirable qualities of the old, except for size, plus that crisp compactness all its own. And, above all, it still retains the aura of streamlined, ultramodern dignity which *is* rather important as an actual symbol of the intangibilities that make up most of the magazine.

The May Astounding itself, as far as these intangibilities are concerned, is good, but definitely lacks the sheer, incandescent brilliance that formerly characterized regular parts of ASF's fiction. That, however, need not be mourned for as long as the quality of the fiction still remains at its present high level. In other words, just a noticeable deterioration from superb to very good for quite obvious reasons; something to be reversed at war's end by those same "obvious reasons."

"Hm-m-m, another serial—better give it first place in the issue." That's getting to be my reaction lately, for almost without fail, the serials and/or the very long novels have been turning up first or second in an issue. And that applies, but definitely, to Part I of Leiber's "Gather, Darkness!" 'Sa pretty good yarn, too, considering that science-fiction is not his forte. However, when an author attempts to weave a very broad tapestry—as this one apparently is—it's better to watch the complete pattern unfold before passing judgment. Anyway, it *looks* as if the tale will be quite good.

Second place? Well, I rather think "Fifth Freedom" deserves that. Alvarez has a nice little yarn there—mature fiction plays as fully large a part in the realms of Astounding as does science, and the story certainly fulfills that qualification.

Kuttner has a new, refreshing angle, and brings it off rather well in "Ghost." Third. It's debatable which of the remaining two pieces of fiction should be rated fourth. "Pacer" is interesting, but descends too often to the levels of hack and cliches; "Let's Disappear" is a fair-enough detective yarn, but even ignoring the science angle, is not comparable to the rest of the issue, nor to Cartmill's usual standard. So, leave 'em as a tie.

A neatly executed cover, something that can be called art work without any qualms. Even though I have a penchant for symmetrical machinery, spatial vistas and futuristic contraptions, this May cover provides a nice change. And it's in keeping with "Astounding's Aura"! As for interior work, see my old comments—they still apply!

Shades of sugar-coated science! Ley makes still another scientific topic quite palatable. Interesting Brass Tacks, too. Hm-m-m, reducing science-fiction to extrapolation—but a few more steps to formulas. Why not? There are plenty of seemingly equal complexities in physics, for example, that have been boiled down to equations. Experimentation and derivation. Similarly s-f. Not as great a degree of accuracy perhaps, but—could be! Science-fiction varies inversely as the square root of—Bill Stoy, 140-92 Burden Crescent, Jamaica, New York.

I can remember way back to when every other letter demanded that we publish a large-size edition!

Dear Sir:

I'm getting sick and tired of all your apologies for having decreased the size of your magazine. I just saw the first issue in the new small size, and it's terrific! It's wonderful! Far superior to the old size.

To the improvement in make-up of the large size—which was its only virtue—you have added this extra attraction—small size! I hope you never go back to the old inconvenient large size: it was annoying to carry around, annoying to hold in your hand and read, annoying because of the terrific amout of wasted paper—each letter was a mile away from its neighbor, the borders were enormous, and there was a gigantic amount of blank space. It was also hard to file away in a bookcase or anywhere else, and the pages, being larger, ripped more easily.

This new issue is simply a masterpiece! Swell make-up, convenient small size, good stories, and no paper waste.

As for the stories. First in quality, "Gather, Darkness!" It should be the best story of the year, if the second and third installments are as good as the first. Second, "Fifth Freedom," good only for its psychological study of a "conchy." It might just as well have been laid today or in 1914. Not in the least was this science-fiction, unless your idea of science-fiction is anything with a lot of rocketships in it.

Third, "Ghost." Entertaining, and well-written with a not-too-good plot idea. Fourth, "Let's Disappear." Hooray! Another Weapontoohorribletobeuseddiscoveredbyamadmaniacwhowantstomakehimselfdictatoroftheworld!!

Fifth, and last in quality, is "Pacer." Why is it that some people, such as the author of this mass of drivel, are permitted to continue living? Perhaps the most nauseating part of it is the ridiculous attempt to depict the father-son relationship, in a most unnatural and inconceivable manner. For eighteen years the son is a human being, in two years of training he becomes a military moron, and becomes human again after two minutes of tension. Believable, yes? *NO!* Not only that, but it was, to say the least, slightly overdone, and also rather hackneyed.

In addition, the plot itself was as vile a costume western as I ever had the misfortune of glancing over. I couldn't bear it sufficiently to be able to read it thoroughly; just enough so that I could tell you what I thought of it.

But aside from that mess of trash, the issue was really swell and up to the usual Astounding quality, which is, of course, the best in the entire field of science-fiction.—Harold Rogovin, 2734 Claflin Avenue, New York, New York.

Gather, Darkness!

by Fritz Leiber, Jr.

Concluding a three-part novel of a fantastic revolution, wherein a tyranny masking itself as a religion falls to a revolutionary party that calls itself a witchcraft!

Illustrated by Kramer

SYNOPSIS

Believing mankind to be in danger of reverting to barbarism, the scientists of the far future take control of the world by establishing a fake religion, in which miracles are accomplished by scientific means. Their rule speedily becomes a tyranny of the very worst sort. The priest-scientists of the Hierarchy live in luxurious, well-fortified sanctuaries. They are recruited from the most intelligent young men of each generation, who are given a thorough re-education on becoming priests. The bulk of mankind are Commoners, whose cultural status is that of the serfs of feudal times. Their lot is one of degrading drudgery. They live in fear and awe of the Great God and the scarlet-clad priests, who are protected by individual force-fields, known as robes of Inviolability, and who possess many supposedly supernatural weapons, including the wrath ray.

The Hierarchy is in the midst of a world-wide struggle with a mysterious organization known as the Witchcraft. Outwardly akin to the Witchcraft of the Middle Ages and avowedly serving Sathanas, God of Evil, this organization is employing the Hierarchy's own weapons to defeat it—using all manner of scientific deviltry to terrify the priests, and the Commoners, too. The Witchcraft possesses an instrument known as the telesolidograph, which projects three-dimensional motion pictures and so creates the illusion of phantoms. Each member of the Witchcraft has a familiar, a tiny, furry, manlike monster—in reality an artificially bred identical twin, living symbiotically on the witch's blood and possessing a highly simplified physiology and mentality. There is short-range telepathic communication between each witch and his or her familiar and between the familiars themselves.

The leader of the Witchcraft is a shadowy being who calls himself Asmodeus. His followers know him only through the instructions he transmits to them. His chief lieutenant is the Black Man, a brilliant and capable, but reckless individual. However, the Black Man has been captured by the archpriest Goniface and is closely confined in the cells of the Sanctuary at Megatheopolis, chief city of Earth. Attempts are being made by Brother Dhomas, a priestly psycho-technician, to *change the Black Man's personality.*

The archpriest Goniface, ruthless, ambitious, daring and competent, leader of the Realist party among the priests and member of the Apex Council, has taken advantage of the crisis to seize dictatorial power. He has crushed the Moderate party, his chief opposition within the Hierarchy, and has won the grudging support of the Fanatics. Headed by the grim old archpriest Sercival, the Fanatics are a tiny party of elderly priests whose minds have apparently become so inflamed with the grandeur of the Hierarchy that they actually believe in the existence of the Great God.

According to Hierarchic law, Goniface has no right to be a priest, since he is a priest's son. His real name is Knowles Satrick. He has murdered everyone who knows his secret, save his younger sister Geryl. She is a member of the Witchcraft, under the assumed name of Sharlson Naurya.

Goniface's chief tool is Cousin Deth, a cruel and cynical deacon—member of the Hierarchic police.

Another of Goniface's agents is the young priest Jarles, victim of a strange series of circumstances. Originally a hot-headed and rather blundering Idealist, Jarles rebelled against the Hierarchy. He became increasingly friendly to the Witchcraft, while hiding out with Mother of Jujy, one of the old crones the Witchcraft uses as a front. However, he was recaptured by the Hierarchy and his personality completely artificially reoriented by Brother Dhomas, using the machine he now wants to use on the Black Man, so that Jarles now is an unprincipled and cold-blooded egotist. He serves Goniface, but hopes eventually to supplant him. Sharlson Naurya, whom he once sincerely loved, he has made his secret prisoner, hoping eventually to use her against Goniface. He has won considerable prestige by betraying to the Hierarchy a group of high-ranking witches, Asmodeus alone escaping.

The imprisoned Black Man is in telepathic communication with his familiar Dickon. In line with a scheme he has in mind, he has ordered Dickon to fetch him the familiars of Jarles and Goniface, bred from stolen tissues. But it is doubtful if Dickon's blood supply will be sufficient for the mission.

Goniface orders that the captive witches be questioned under torture before the Apex Council. He is forced to put a stop to this when he finds himself suffering the same agonies as the tortured witches, without any apparent rational explanation.

The Commoners of Megatheopolis, enraged because the Hierarchy has not protected them from the supernatural terrors of the Witchcraft, mob the Sanctuary. Similar riots take place all over the Earth. Goniface pacifies the mob by telling them that a Grand Revival, a great religious festival, will be held the next day. He assures them that miracles will occur and that the Great God will give sure indication of his mastery over his archenemy, Sathanas.

The priests make elaborate preparations for the Grand Revival, setting up a telesolidograph shield around the Great Square and taking all other possible precautions against interference by the Witchcraft. Meanwhile, an unremitting witch hunt is being carried on.

XVI.

Since the dawn the mighty carillon of the Cathedral had been deluging Megatheopolis at intervals with an excited and joyous pealing of bells, and before the first burst was ended the Great Square had begun to fill. If the darkness had not been so full of the terrors of Sathanas, the Commoners would have started coming at midnight.

"Awake! Awake!" the bells seemed to ring out. "Wonders. Wonders untold. Hurry! Hurry!"

Many had come fasting and brought no food along. For was not this to be a Grand Revival? It was the Great God's turn to provide.

From every corner of Megatheopolis they came, and from miles out in the surrounding countryside. Down every cobbled street they came, hurrying to get the best places. Plodding, loose-jointed farmers, who smelled of the stableyard and whose faces were brown and crinkly as the soil. Lean, long-gaited shepherds and cowherds. Pale, stocky miners. Stoop-shouldered, sunburned road workers. Burly stalwart smiths, with bulging forearms. Weavers, tailors, cobblers, stonemasons, carpenters, loggers, millers, bakers, butchers, carters, traders, tinsmiths, also wheelwrights and potters.

And their daughters, sisters, mothers and wives, more marked by work than themselves.

Even the Fallen Sisterhood was there. Though these came in black smocks and hoods, were much glared at by the other women, and behaved meekly.

And a few thieves were at work. Several times the cry of "Cutpurse!" was raised.

By an hour after midmorning, the Square was packed up to the double line of deacons, who kept clear a considerable space in front of the Cathedral steps. The surrounding rooftops were packed, and boys had climbed the chimneys. A little earlier a small, overcrowded balcony had collapsed, injuring several and creating a minor panic that was quickly hushed by the deacons scattered throughout the crowd. The surrounding streets were crowded with late comers. Everywhere were jostlings, elbowings, disputes as to who had first claim to the best places, shouting for lost children, and a ceaseless hum of conversation which the clangor of the bells periodically drowned out.

It was not at all a happy crowd or even a pleasant one. It was the same crowd that yesterday had stormed halfway up the Cathedral steps, screaming insults at the Hierarchy because it could not defend them from Sathanas. The same crowd that had killed two deacons, manhandled a priest of the First Circle, and flatly demanded that the Hierarchy prove itself by interceding with the Great God to crush Sathanas, to pull away his vast horny hands from the Earth. But now they were observing a kind of truce. Yesterday the priests had promised them that the Great God would give them a sign of his favor and of his mastery over Sathanas by performing miracles at the Grand Revival. And last night, as if in token of this, there seemed to have been a decrease in hauntings and other Satanic eeriness.

But still there was a flinty look in most eyes as they gazed upward at the vast and serenely brooding image of the Great God atop the Cathedral—a flinty look that suited well their unjoyful, work-dulled faces. It seemed to say, "We are waiting, Great One. If you do what the priests say you will, then we will go on with our lives as before, although they are hard ones. For we will know that such is the rule of the Universe, and there is no happier way of life for us. But if not, if you have no interest in us and the priests are unable to influence you, if it turns out that you are no more powerful than Sathanas, who at least does not demand tithes, then . . . then—"

Yet, although grim sullenness remained, the holiday atmosphere and crowd excitement had its effects. A Grand Revival was one bright day in a thousand black ones, a blessed pause in the otherwise ceaseless strain and toil. Such brief, rare glimpses of the kindlier side of the Great God were infinitely precious—the sort of thing that one remembered for years and that made misery easier to bear, that indelibly marked the imagination of a child.

Moreover, it was hard to maintain that anger in the face of the parasympathetic emanations which drenched the Square. The Commoners recognized them, although they had no inkling of their nature. They were familiar with the feeling of peace that settled on them whenever they entered the Cathedral. They knew it would vanish afterward and the old misery return, just as headache and nausea followed a bout with illegally distilled beverages. But that did not make the feeling of present pleasure and happiness any easier to resist.

The drugged honey the Hierarchy fed them was not the less soothing and sweet because it turned to ashes afterward.

The parasympathetics had one other effect. They stimulated the nerves controlling the digestive tract and thereby greatly increased the hunger of a crowd which had for the most part not yet eaten today. A hundred thousand mouths filled with saliva. A hundred thousand throats swallowed, swallowed, swallowed.

Finally, at high noon, the carillon broke off in the middle of the loudest and most clangorous burst it had yet pealed forth. For a moment there was silence, and a sensation of tremendous pressure, as a hundred thousand Commoners held their breath. Then, from the Sanctuary, came the deep, tremendous organ notes of a solemn march, somber and rolling, yet full of mystery and majesty and power, like distant thunder become harmonious—such a music as must have sounded when the Great God first imposed his will upon black chaos and created the Earth.

Slowly, in step with this titan melody, the great reviewing stand which had been raised overnight beside the Cathedral door, began to fill with priests whose scarlet robes were agleam with gold. The nearest Commoners could make out the emblazonment on their breasts—a triangle at whose vertex glittered a great jewel—and word was breathlessly whispered back that no less than the Apex Council itself would preside over the Grand Revival. There were few enough Commoners who could boast of ever having seen an archpriest. To get a glimpse of the whole Council—actually to see with your own eyes that awesome summit of Hierarchy—was an event to be remembered for a lifetime. It was like getting a peek at Heaven.

Wonder began to crowd out surliness, or at least to shove it into the background of their minds.

The music quickened. The high doors of the Cathedral swung outward, and there issued forth, four abreast, a procession which incarnated the pomp and power of the Hierarchy.

First two high-ranking priests, bearing censers.

Then a contingent of black-robed deacons.

Next, a column of First Circle priests, whose scarlet robes were without emblazonment. Tall, young men, and handsome. Their shaven heads imparted a strange unearthliness to their beauty. It was easy for their relatives in the crowd to forget—or almost forget—that these young demigods had ever been Commoners.

Following them, the higher circles. The crowd recognized them by their emblazonments, although they did not know the true significance of those emblazonments, thinking them mystic symbols confirming the frightening supernatural powers of their wearers.

Hand giving a blessing and at the same time grasping a stylus—emblazonment of the Second Circle. The circle of pastoral priests, clerks, minor confessors, minor technicians, minor everything else.

Diagram in silver and gold of the intertwined nervous and circulatory system—"the little bush," the Commoners called it—emblazonment of the Third Circle of doctors, confessors, hypnotists and psychiatrists.

Lightning-and-coil—the insignia of the Fourth Circle. Very competent-looking, clear-eyed priests, these. They were the technicians, engineers, and lesser managers who kept the scientific heart of the Hierarchy ticking. From this circle the ranks of the Seventh and the Apex were largely recruited.

And all the while, as they marched in stateliness and dignity from the Cathedral, circling the space the deacons had kept clear, before drawing up in ranks around the reviewing stand, the music strengthened and swelled, the original somberness brightened with the skirling of flutes and the clash of cymbals, enriched with the throaty tones of woodwinds and strings, as if the Great God were proceeding with the creation, and sun and stars and lush green grass were showing forth.

Atomic probe entwined by a reading tape—the Commoners thought it a rod and serpent—the Fifth Circle of research scientists, scholars, historians and professional artists. At this point the size of the contingents decreased sharply.

Human brain encircled by stylized equations in psycho-sociology—the Sixth Circle. These were the shrewd ones, the knowing ones. Experts in propaganda and social control. Research psychologists and psychiatrists.

Clenched fist with lines of force radiating from it—and that meant the same thing in any symbols. Power. The Seventh Circle of supervisors, major executives, general managers.

And as the priests marched, as the music grew ever more rich and warm and dazzling—as if it were climbing like the sun to the top of the sky—they seemed to tread under their feet all evil, all darkness, all rebellion, any and everything that presumed to lift its head against the Hierarchy.

On the reviewing stand, Goniface wrinkled his nostrils and turned to one of the lesser priests standing in attendance behind him.

"Whence comes that odor?" he inquired.

There was no longer any disregarding it. Mingled with the cloying sweetness that was diffusing through the Square, came ever stronger and stronger whiffs of a pungent, goaty stench.

The attendant priest indicated that he did not know, but would try to find out. Leaning forward, Goniface glanced thoughtfully at the two priests bearing censers. But he recognized them both. One was a stanch Realist, the other a stern-faced Fanatic. Now if one of them had been a Moderate— Though it was highly improbable that any of the crushed Moderates would indulge in such purposeless spite.

It occurred to him, moreover, that popular superstition associated the goat with Sathanas.

He touched a switch on the portable televisor set up in front of him, and there sprang into view the features of the chief technician at Cathedral Control Center.

"No, your supreme eminence, there is no possibility of the Witchcraft hocussing any of our apparatus," he explained in answer to Goniface's question. "We have a comprehensive warning system set up, which will instantly inform us if force pencils or any similar manipulatory fields are introduced into the Square, and we have countermeasures ready. The telesolidograph shield is, as you know, completely adequate. In short, the Great Square and the Cathedral, and a considerable region around them, are *isolated*. You can rest assured of that.

"The odor? Oh, we know about that already. A most unfortunate, though unavoidable accident in the mechanism of one of the odor projectors. It has been rectified."

As Goniface reprimanded him, he scanned the faces of the other priests in the control center. All loyal Realists, except two of the Fifth Circle physicists. And they were Fanatics. Good.

"Yes, your supreme eminence," the chief technician assured him in answer to a final question, "we can at an instant's notice throw up a repulsor dome over the reviewing stand. And the squadron of angels you desired us to hold in readiness can get into the air almost as quickly."

Satisfied in the main, Goniface switched off the televisor. True to what the chief technician had told him, the goaty odor had almost faded out, though a few wrinkled noses were to be seen here and there. He would have liked to have Cousin Deth beside him at the moment, but the little deacon couldn't be spared from the witch hunt. Jarles, however, made a fair substitute—or would when he had more experience. Goniface glanced at the hard face of the one-time renegade priest standing behind him with the other attendants. An obviously ambitious and cold-blooded cockerel, but realistic and smart. His trapping of a familiar and so revealing the secret of the little beasts had been a noteworthy piece of work. He could use more like him. No servant could compare with those whose personalities had been made to order.

He looked out at the sea of faces.

The march had finished in a great, triumphal burst of sound that seemed to signify the Great God's final and most important act of creation, when, after the catastrophic experiment of the Golden Age, he had brought into being the crowning glory of the Hierarchy.

The crowd, eager with hours of waiting, but kept by the parasympathetics from getting overly tense and unruly, hypnotized by the music, dazzled by the general splendor, fell easy prey to the revivalistic preachers, whose mightly amplified voices thundered one after another through the Square. Strains of a softer music than the march subtly emphasized the rhythm of the preachers' fervent chanting, while the parasympathetic emanations were artfully varied to increase the effects of their exhortations, with sympathetics occasionally mixed in.

The emotional resistances of the crowd gave way. Whole sections began to sway from side to side, until the movement had spread through the whole Square, and all the Commoners, including those on the rooftops, were swaying uniformly like a single organism. And from a hundred thousand throats came a wordless sound that intensified the preachers' rhythmic emphases—a profoundly stirring yet disgusting animal sound midway between a grunt of pleasure and a sob.

Here and there were symptoms of even more violent emotional release—ecstatic wails, screams, wildly flailing arms, tiny holes in the crowd where someone had dropped to his knees. It would have been easy to throw them all into a state of crazy and utter abandon, but that was not the intention. As it was, deviations to a wilder behavior could make no progress against the general chanting sway, and more quickly re-engulfed in it.

"Great God, hurl down Sathanas, hurl down the Lord of Evil!" Grunt and sway. "He caught us in snares, but we struggled against them!" Grunt and sway. "He raised terrors by darkness, but we called upon you!" Grunt and sway. "He sent horrors against us, but we clung to our faith!" Grunt and sway. "Send him back to hell, send him back to his sinners!" Grunt and sway. "Let him root in filth, let him swill with the damned!" Grunt and sway.

There was something almost frightening about that hypnotic, uniform movement. As if the crowd constituted a vast living generator, which would eventually build up such an enormous potential that a spark would leap the gap between the supernatural and the natural. And, in a crude way, that was how the crowd felt about it. There would be a miracle. There would be a miracle.

Then, with a thrilling display of mob-mastery, the last and ablest of the preachers stilled the swaying and hushed the sound—not by calming it, but by transforming it into motionless tension, an almost unbearably poignant anticipation.

All eyes turned toward the preacher, who stood alone on a rostrum in front of the reviewing stand. He dropped to his knees then, and cried out, in a voice vibrant with compassion, "Great God, it has been a long and hard test that you have imposed upon your people. You have tried them to what seemed the limit of their strength and then still tried them. Daily the Hierarchy has pleaded with you to spare them from further trials. Night and day without ceasing, prayers have gone up from the Sanctuaries, for nothing causes a priest so much agony as to see his people suffer. But you, in your infinite wisdom, have seen fit to test them to the uttermost.

"Great God, your people ache for your loving kindness. Long have they gone without the milk of your infinite mercy, the food of your infinite strength. They thirst. They hunger."

This was no more than literally true. Kept waiting until midafternon, ceaselessly bombarded by parasympathetics, the crowd was ravenous.

Turning on his knees, the preacher lifted his hands in supplication to the massive, all-dominating image that formed the upper half of the Cathedral.

"Great God," he cried, "your people have passed the test! In terror and suffering, they have maintained their faith. They have torn out Sathanas from their hearts. They have proved themselves, and your Hierarchy vouches for them. Be good to them, Great God. Turn away, we beseech you, your face of wrath and show your all-kindly countenance. Loosen for your people the strings of your infinite bounty. Tilt for them your horn of plenty. Animate with your divine presence the cold, lifeless stone and let ambrosia drop from your hands and nectar stream from your fingertips. They have hungered long enough, Great God. Give them food and drink!"

Mentally stupefied and emotionally taut as they were, the crowd realized what must be coming and prepared for it. The older knew from experience, and the younger had been told, what wondrous dainties would soon come spilling down. Numerous wooden bowls and copper pitchers appeared suddenly. Others stretched small sheets between them to catch the miraculous cakes. Tubs and buckets showed up on the rooftops, while a few frantic souls climbed on their neighbors' shoulders and teethered there precariously, holding containers of one sort or another.

But the majority just stood with heads thrown back, mouths open, and hands upstretched.

There was a faint shudder of movement in the gigantic image, sudden silence in the Square. Slowly then the vast, awesome face looked down. Slowly the harsh lines softened, to be replaced by an indulgent and benignant smile—like a stern and preoccupied but withal loving father who finally remembers the obedient children crowding around his feet.

Slowly the Gargantuan hands stretched out over the Square, palms upward, in a gesture of tital generosity. Then, from the right hand, ten thousand tiny fountains suddenly sprayed, while from the left cascaded down a rain of crusty flakes and tiny cubes.

A greedy, happy, excited, quite involuntary cry rose from the crowd, as the food and drink began to sprinkle them.

One second. Two. Three. And then the cry changed abruptly to a strangled spewing, and there swept through the massed ranks of the priests and across the reviewing stand a hideous stench that seemed compounded equally of putrid meat, rancid butter, moldy bread, vinegar and embalming fluid.

As from one giant throat, the crowd gargled, retched and spat. And still the noisome rain and noxious snow continued irrevocably to fall, drenching them, plastering them. Hands were ducked, hoods pulled up. Those who had spread sheets crowded under them, while a few of those who had held up bowls now inverted them and clapped them on their heads. And still the dreadful stuff rained down, so thickly that the farther side of the Square was murkily obscured.

Snarls then, and angry cries. First a few, then more. Here and there the fringes of the crowd surged forward against the double line of deacons.

The preacher on the rostrum rose to the emergency. Stepped-up amplification enabled him to outroar the crowd.

"The Great God is only testing you!" he bellowed. "Some of you must lack faith! That is why the miracle-food does not taste like ambrosia and nectar!

"But the Great God is now satisfied of your faith!" he continued, not caring how illogical he sounded so long as he got to his main point, which was, "The Great God will now perform the true miracle! Behold how he rewards you!"

The stinking rain ceased.

On the reviewing stand Goniface thundered at the televisor, "Stop that second miracle!"

From the panel the chief technician stared back blankly at him. He gave no sign that he had heard the order. He seemed stunned, bemused. "But we're isolated," he was repeating dully. "We haven't got a quiver out of any of the warning systems."

"And someone has turned on the parasympathetics!" Goniface continued rapidly. "Attend to it! And stop that second miracle!"

The chief technician came to life with a jerk and quickly signed to one of his assistants, who almost immediately answered with frantic gestures.

"Too late. The controls have jammed again."

For the first moment it seemed that

Goniface's fears were groundless. From the Great God's outstretched hands there began to sprinkle a shower of tiny golden coins.

The forward movement of the crowd checked. Again they looked upward. The ingrained habits of a lifetime were not easily overcome. It was second nature to believe what a priest said. And the descending shower did have a true golden glint.

But after the first sprinkle, it changed from gold to red—too bright a red. Screams and yells of sudden pain mingled with the renewed snarls as tiny red-hot disks spattered against tender flesh, or were greedily caught out of the air and as quickly hurled away, or chanced to drop inside clothing or were trodden by bare feet.

With a roar that muffled the cries of pain, the crowd surged ponderously forward in a ragged wave, partly to escape the red-hot shower, which stopped just short of the double line of deacons. But that was not the main reason, for the shower stopped and the forward surging continued, strengthened, and the roar became louder and uglier. Fists were raised. Deacons went down. Here and there the double line bent backward, broke.

To avoid any chance of such a stupid tragedy as had occurred yesterday at Neodelos, Goniface had forbid the cordon of deacons to carry wrath rods. In their present state of nerves, they would be too apt to use them injudiciously. But now some sort of force was necessary. At his rapidly transmitted command, the First and Second Circle priests in front of the reviewing stand marched forward to support the deacons, hurrying in either direction to form a long-enough line, and switching on their repulsor fields as they went, so that their robes puffed out tautly. Across the dissolving line of deacons, the crowd hurled filthily smeared pots and pitchers at the advancing priests, but they rebounded harmlessly from the individual repulsor fields.

Something was wrong with their halos, though. They were flashing on and off.

Suddenly there was confusion in their ranks. The first impression was that those in the center had simultaneously hurled themselves at each other and then neglected to break apart. Swiftly others catapulted themselves at the original group and stuck to it. The ends of the hurrying line were jerked suddenly backward, some of the priests falling, yet still skidding along, until all of them were jammed together in one helpless, roughly circular, scarlet clump.

To Goniface, it was apparent almost immediately that some unaccountable influence had changed their repulsor fields to attractors, with a simultaneous increase in range and power.

But most of the archpriests could only stare helplessly at the ever-mounting chaos around the reviewing stand. Long habit had taught them to preserve inscrutable expressions, and the habit continued to function automatically, though now their facial masks concealed nothing but empty stupefactions. It was not physical fear that froze them. They felt that the whole materialistic world on which they based their security was going to pieces before their eyes. Physical science, which had been their obedient servant, was suddenly become a toy in the hands of a dark power that could make or break scientific laws at pleasure. Something scratched out the first principle of their thinking. "There is only the cosmas and the electronic entities that constitute it, without soul or purpose—" and scribbled over it, in broad black strokes, "The whim of Sathanas."

The high-ranking priests massed around the reviewing stand were in no better shape. They stood there, doing nothing, as the stinking wave of the garbage-drenched crowd surged forward, engulfing the struggling deacons like a row of black pebbles, breaking around the helpless clump of the lower-ranking priests as around a red rock—

a few of them getting caught in the attractor field in the process—and roaring up the steps of the Cathedral.

A stone, its momentum almost spent, lobbed into the reviewing stand. It brought no reaction. With three exceptions, the archpriests and their attendants were like scarlet-gowned dolls.

The three exceptions were Goniface, Jarles and the old Fanatic Sercival.

Goniface had at last managed to get an order through the minor chaos of Cathedral Control Center. Down over the Cathedral, swerving around the still-forward-bending image of the Great God, swooping a bare few feet above the reviewing stand, dove a squadron of angels—a sight fantastically grotesque, as if a score of flaxen-haired, swan-diving demigods had dropped from the cloudless sky.

They flattened out where the forward edge of the crowd was hurling itself on the ranks of the higher priesthood, and skimmed across the Square—so low that they brained a few unfortunates.

The attractor field of the clumped lower-ranking priests interfered catastrophically with the course of the center angel. It nosed downward and crashed, crushing priests and Commoners alike. It crumpled, revealing its metallic construction. Through a gaping rent there showed the body of its priestly pilot, killed in the crash.

But the other angels banked sharply upward, just missing the rooftops across the Square, and looped back for another dive.

There were ghastly screams from those who had felt the mangling force of the downward-directed propulsion jets.

Insane terror began to replace the insane anger of the crowd. Like some helpless beast, it floundered senselessly. Some in the forward fringe still grappled with the higher-ranking priests. Others, attempting to flee, only added to the confusion of the trapped, milling central mass. All street mouths were hopelessly choked.

Then, when the angels had momentarily become tiny shapes against the blue of the zenith, there came hurtling from the Commoners' Section, over the horizon of roofs, six black forms trailing like cuttlefishes a dense, inky smoke behind them. Straight for the Cathedral they came, like bats out of hell. And that hell was their most likely source, was soon apparent, for as they hurled closer well above the mob, they were seen to have misshapen and taloned arms, furry nether limbs rigidly extended, and short black tails. While horned black fiend-faces grew, grew, grew.

The first went whipping in close circles around the rostrum on which the preacher cowered, wreathing him with black fumes until he was completely obscured.

The next two banked upward and executed intricate loops around the head, body and arms of the Great God, festooning him inkily. His vast face still wore the original indulgent smile, imbecile and vacuous in this situation. Then, from the mightiest amplifier of them all, that located behind his own idiot-grinning mouth, the Great God began to bleat thunderously, "Mercy! Mercy, master! Do not hurt me! I will tell everyone the truth! I am the slave of Sathanas! My priests have lied! The Lord of Evil rules us all!"

The last three devils shot straight at the reviewing stand. White-faced archpriests, at last springing up, stared at them horrifiedly. Then, when they were yards away, there was a cutting-off of sound and a wavering in the scene before them. In response to Goniface's frantically repeated commands, Cathedral Control Center had finally thrown up the heavy repulsor dome to shield the Apex Council. The dome appeared to be outside the range of the influence that had reversed the polarity of the lower-ranking priests' repulsor fields, for the three approaching devils careened away wildly.

In that pocket of sudden silence in the midst of visible chaos, it was startling how clearly the doomful voice of old Sercival rang out. All through the Grand Revival, the lean and aged Fanatic had not spoken a word, only gazing before him with a somber displeasure, occasionally shaking his head and seeming to mutter to himself.

Now he cried, in a voice that smote like an icy dagger, "Who, I ask, has performed the miracles today? At long last the Great God sickens of our unbelief. He deserts us. He leaves us to Hell's mercy. Prayer alone—and faith absolute—can save us, if it be not too late even for prayer."

The other archpriests did not look at him, but the impression they gave was that someone was speaking their inmost thoughts. Motionless they stood, as lonely men communing with terror. Even Goniface's exasperation and contempt were sullied with the faintest trace of the poisoning corruption of doubt and fear.

But into the hard, watchful eyes of Jarles, standing sideways behind Sercival, there crept a look of incredulous realization. Today was the first time he had ever seen the leader of the Fanatics. Now, for the first time, he heard him speak. It was as if the reality he knew had been rotated through unseen dimensions, so that all orientations were reversed and the outside became the in. As if he had just received proof positive that all life is a masquerade and all men are actors in a play, and wear very different forms and faces when they remove their costumes and make-up. That old Fanatic—from where Jarles stood he saw a silver-touched, parchmenty skull, a gorgeously gold-worked robe depending from lean shoulders. But if the man should turn around, would he see a prophet's hawklike face, or only a featureless mask of utter blackness?

Memory and the unerring sense of recognition that came with memory, fought with incredulity and conquered. Instantly his new personality made one of those hairline decisions which were its chiefest pride.

Conscience smote him as he did the deed. Black, agonizing waves of guilt washed through his mind, telling him this was a crime beyond forgiveness, a nefandous action from which the universe turned aside in loathing. Yet he choked down conscience, as a sick man subdues his retching, and he did the deed.

He pointed the Finger of Wrath at Sercival and let him have it, full power, in the back, until a tiny patch of daylight showed raggedly through.

As Goniface wheeled toward him, as the other archpriests cringed dazedly from this new menace, as the grimly erect form of the mortally wounded Fanatic swayed before it fell, Jarles cried out, "His was the voice I heard in the Coven Chamber! He is Asmodeus, leader of the Witchcraft!"

And springing forward, he caught the toppling body, let it down against the table, and slitted open the scarlet-stained, scarlet robe, with its ray-charred hole. Clinging in death to the skinny, rib-ridged torso, slain by the same blast that had mangled the Fanatic, its age-silvered fur drenched in its own blood, was a gaunt familiar whose wizened face was a grim travesty of the pain-racked features of his twin.

The archpriests stared as if at the impossible, their masks of inscrutability torn away at last. This revelation of treachery at the heart of the Hierarchy itself cracked the very core of their security.

Goniface looked down at the two. It was as if the dome-sealed reviewing stand had become for a space of time the silent center of the universe, where all secrets are laid bare, the tense and motionless core round which all action wheels and swirls. Outside the dome, a mad conflict was progressing through momently altering phases. The crowd, saved from a second onslaught by the angels, heartened as well as dumfounded by the appearance of its demon allies, had once again come to grips with the higher-ranking priesthood, who were withdrawing into the Cathedral. The angels had swooped back into the fight, violet wrath rays blazing from their eyes, three or four to each devil, and there resulted a giddy, whirling combat, in which black fumes were employed as smoke screens.

But, for the moment, that wild, silent commotion seemed no more to Goniface than a strange, savage mural on the repulsor dome—a painting of a battle—a background for an incredible crisis.

So overpowering was his urge to question the dying Fanatic, that he grudged the moment he had to spare in contacting Cathedral Control Center and making the chief technician understand his command, "Seize the two Fifth Circle Fanatics! They are the ones who confused and interfered with your controls! Slay them if need be!" He did not pause to watch the outcome of the struggle between the outnumbered traitors and his loyal Realists.

He grudged, too, the moments lost in ordering his lieutenants, "Descend at once into the Sanctuary. Organize raiding groups. Seize all Fanatics. Slay them if they resist. Speed is essential. As soon as they realize what is happening, they will seek to escape. Close the Sanctuary, both to prevent them and to stand off the crowd. Inform Cousin Deth in the crypts of the new situation. Have Web Center transmit similar instructions to all Sanctuaries. Take all obvious auxiliary measures. Move!"

Then, stony-faced, yet terribly eager, in the grip of a compulsion wrought of crisis, feeling it absolutely essential that the old Fanatic answer certain questions before he died, and equally important that the old Fanatic hear and understand certain things he must say to him, he addressed Sercival. In an almost involuntary torrent of realization, his words burst forth.

"I was blind, we were all of us blind, not to have guessed, not to have known for certain, that the leadership of the Witchcraft *must* be in the Hierarchy itself. For from where else could come the scientific knowledge sufficient for a time to outstrip and outwit ours? Where else could there have been the vision, the historical scholarship, the devilish cunning, save in the Hierarchy?

"I was more than blind not to realize that in all ways the Fanatics have deliberately *helped and furthered* the Witchcraft, by maintaining the real existence of the Great God—and *Sathanas as well.* By their oft-asserted belief in the reality of the supernatural—which we tolerated because they were a tiny party, composed largely of aged and high-ranking priests—they subtly determined the materialism of the vast majority.

"Lucky indeed for the Hierarchy that up to the present moment I have worked so much in secret, and had no Fanatics among my helpers. Otherwise you might have been able to engineer the escape of your captured accomplices. And if you had known that my faithful agent Jarles had spied on your Coven meeting and heard your voice, you might never have been detected."

Sercival was smiling with pain-drawn lips through which panting breaths went quickly and noisily. With a certain inward confusion, Goniface realized that it was his place to ask questions, not to answer them.

"You sat beside me when they put the witches to the torture," he continued, his voice under better control. "You used a short-range pain gun on me, I believe?"

With difficulty Sercival smiled again. His voice was like a something from the tomb, windy, faint, labored.

"Perhaps. Perhaps not. The stratagems of Sathanas . . . are varied." The eyes of the archpriests widened. It was as if a shudder went through their crowded, scarlet-and-gold ranks. The voice of Goniface hammered on.

"On that same occasion, moreover, you demanded that the witches be slain—because you knew I would never consent to it until they had been questioned. Just as you and the other Fanatics have always camouflaged yourselves by counterfeiting fierceness and severity, and by advocating harsh measures against Commoners and lesser priesthood alike—because you knew such measures would never be taken on your advocacy alone."

Again Sercival answered with a contorted smile, which might equally mean "yes" or "no," but was certainly ironic. It was a strangely grim and portentious scene. Outside, the devils, like well-trained cavalry, were leading off the angels, tempting them to a long pursuit. Black plumes draped the sky. The crowd had torn down the rostrum and killed the preacher, though unable to make any impression on the reviewing stand. Most of the higher-ranking priesthood were making good their escape into the Cathedral. In desperation, they had switched on their repulsor robes, and found that they were not subject to the polarity-reversing influence. They were joined by a few of the lower-ranking priests, for the clump had suddenly broken up. But many scarlet robes were trampled in filth, their wearers slain by the frenzied mob, which was now mostly engaged in a futile pelting of stones at the walls of the Sanctuary.

Inside, silent archpriests—profoundly shaken men, uncertain what to think or believe—crowded close to watch, as their World Hierarch leaned forward tautly over the dying leader of the Witchcraft, seeking to force from his smiling, leaden lips an open admission that the methods of the Witchcraft were purely materialistic and nonsupernatural.

"You were a small group, in the Hierarchy, desiring to overthrow the Hierarchy," Goniface half accused, half questioned. "That meant organizing a movement among the Commoners, since you were too few to attempt direct action and, like all priests, you were closely watched. You could only supply the leadership and the research. Commoners did the actual work. The familiars served as messengers and liaison officers—"

That brought words from Sercival, though unexpected ones. Feebly he moved his hand until it touched the blood-matted, silvery fur of the stiffening familiar.

"Dead, too, Tobit, oldest of your short-lived brethren?" He breathed. "I shall be with you . . . in hell. We will wear fine new forms . . . and be true brothers."

"Today," continued Goniface, his voice grown rasping, "the capture of your leading Commoners and the special precautions we took, forced you for once to do the actual work yourselves. It was not too difficut. For example, one of the censer-bearers was a Fanatic!

"As for the stinking food and wine, you introduced powerful ferments and putrefactents into the sealed storage chamber, perhaps using radiations to speed up the process. The alcohol in the wine became vinegar and aldehyde. And so on. Heating the gold was even easier. Probably you shunted a powerful current through the appropriate storage chamber. The gold in the tube leading from the chamber escaped. Hence the first coins to fall were cool."

Old Sercival's eyes still glittered as brightly as ever, although the leathery sockets were now doubly shrunken. His voice was a ghost's.

"Perhaps. Perhaps. It is a matter of indifference to Sathanas . . . what methods his followers employ. On occasion . . . he does not scruple . . . to use science . . . to defeat science."

Again the shuddery reaction from the archpriests. Again Goniface's hammering continuation.

"Finally, it was easy for your men in the control chamber to project a limited field reversing the polarity of the robes, to play a specially prepared, mislabeled voice tape through the Great God's amplifier, and to tamper with the parasympathetics!"

There was a triumph in his voice that he did not wholly feel. Somehow, it seemed to him, everything to the contrary, that the leader of the Witchcraft was slipping through his fingers, spoiling the completeness of his victory by still maintaining a belief in the reality of the supernatural. Goniface sensed the uncertainty and fear in the archpriests around him. Even archpriests tended to trust the last words of the dying.

Besides, the struggle was not yet over. Today the Witchcraft had won a great victory. It would take years to reestablish the old faith and docility of the Commoners. And, although the Witchcraft had lost its leaders, there was still its vast organization outside the Hierarchy, almost intact, save at Megatheopolis. It would be sure to make a last, desperate effort, beginning tonight.

Finally, Goniface himself was not altogether unshaken. His own rapid analysis of the actions and motives of the Fanatics left too many mysteries unsolved, too many questions unanswered. One in particular beat at his mind.

Old Sercival lifted his head a little and thick sounds came from his throat, as if he sought to speak. The fingers of his left hand moved feebly, tracing the beginnings of some ritual gesture.

"Sathanas," he whispered, "receive . . . my . . . spirit—"

The archpriests were like so many plaster images. Outside, a scene of continued tumult was illumined by a red sun already close to the western horizon. From the east, darkness was creeping.

"You are very clever," Goniface continued, bending even nearer to the dying leader of the Witchcraft, grudging the moments it took to ask his final question, "but you made one mistake, so strange a mistake that it puzzles me. Why did you always support me in the Apex Council? Why were you so quick to vote for the excommunication of Frejeris? Why did you offer no opposition when the most realistic of the priests, the one most dangerous to the Witchcraft—myself—was made World Hierarch?"

There was silence in the isolated hemisphere under the repulsor dome. The archpriests leaned forward, bent close to catch the answer. But it never came.

Asmodeus was dead.

XVII.

Cane in one shriveled hand, candle in the other, Mother Jujy hobbled through the ancient tunnel. Occasionally she muttered to herself, indignantly, venomously.

"Won't let an old witch spend her dying years in peace! Won't even let her live under the ground like a mole! Oh, no! The deacons must come down and muck up her tunnels and chevvy her deeper and deeper, with their witch hunting! Not that it's Mother Jujy they're after. Oh, no! Brain Mother Jujy and leave her in the corner! We don't want her. It's the new witches they want. The young witches. The pretty witches. Mother Jujy was pretty once. These new ones wouldn't have had a chance with her! But now they've gone and jiggered the whole world with their craziness, turned it topsy-turvy, so there's no place left for an old witch! May they jig on red plates in hell for it!"

In her vehemence, she had stopped and was shaking her cane at the low, rounded ceiling. A black cat, which had been scouting ahead by the wavering candlelight, came back and mewed at Mother Jujy inquiringly.

"No, Grimalkin, it's not a mouse, and I've got no food for you! But never mind, Mother Jujy'll starve down here, and you'll be able to pick her bones—unless she picks yours first! And you may thank the new witches for it, who ruined the trade! Go on and sniff at the shadows. We're not stopping yet."

Hobbling along, she resumed at intervals her savage grumbling.

"The world was bad, but they've made it worse—though I wouldn't have thought that possible. Wrecked everything, they have, with their hocus-pocus and their squeaky-scuttly familiars! When they first showed up, Mother Jujy was nice to them, helped them, did them favors. What did she get for it? Driven down into the tunnels, can't even stick her nose above ground! Curse the whole pack of them!" Again she stopped and waved her cane wildly at the ceiling. "May they all kill each other off—witches, priests, Commoners! So that when Grimalkin and I come up, there's no one else left! Then maybe we'll have some peace! Though if that happened, someone would think to flood the tunnels first!"

From ahead came a terrific spitting and squalling. Mother Jujy hurried forward, the long shadows limping and reeling wildly with her as the candle bobbed and flickered.

"What have you found, Grimalkin—a rat, a snake or a dead deacon? Whichever it is, it's not worth the rumpus you're making."

Grimalkin, a black arch of swollen cat, had retreated from a little copper-touched huddle of shadows and was hissing dreadfully at it.

Mother Jujy advanced toward it, bending and squinting. "What is it? A red rat? No, a red monkey. No, by the stench of Sathanas! A familiar! A dirty, dead familiar!"

And she raised her cane to hit it.

From the huddle of shadows came a feeble, piping voice.

"Aye, kill me. Slay Dickon. Dickon is weary of waiting for death in the chilly dark."

Mother Jujy paused with uplifted cane.

"What's that? Be quiet, Grimalkin! I can't hear what this morsol of foulness is lisping at me."

"Slay Dickon, I said. Shatter his brittle bones with your huge stick, Mother Jujy. Give your manslaying cat leave to rend him with her claws and drink his cold, worn-out blood. Dickon's ghost will thank you for it."

"What makes you think we'll do you any favors, sniveling puppet?" Mother Jujy inquired acidly. "I know your voice. You are the foul pet of that jigging trickster, the Black Man."

"Aye, but now Dickon's big brother languishes in the cells of the Sanctuary, where cruel priests torture his very thoughts. He cannot protect Dickon now. You can slay Dickon in safety."

"It's useless to beg, filthy manikin, for we won't oblige you. Back, Grimalkin!" The cat had pranced forward stiff-legged and was making threatening swipes at Dickon with rigid forepaw. "So your cocky master finally fell off the fence he capered atop, eh?"

"Aye, Mother Jujy, and the whole New Witchcraft goes swiftly to ruin with him. Many others have been captured and imprisoned. There was one slender hope. If Dickon had been able to carry out an errand his brother sent him on, something might have been accomplished. But now Dickon lies helpless in subterranean darkness. Slay Dickon before his misery slays him."

"Speak louder, filthy manikin, I can't half hear you!" said Mother Jujy, bending closer. "Why, ungrateful, disobedient skin-and-bones, can't you run the errand? Why have you stopped here like a lazy apprentice to snivel and whine?" and she prodded the familiar with her cane.

"Dickon's blood has given out. The little suppet he has left would not carry him a hundred paces, and it grows swiftly cold. If Dickon had fresh blood, he would go skipping like the wind. But there is no fresh blood here."

"Insult us, filthy manikin?" cried Mother Jujy angrily, raising her cane. "Grimalkin and I have blood, and, withered though we be, I'll have you know it's fresh enough!"

"Your pardon, Mother Jujy. Dickon meant no insult. Dickon was referring only to blood that he might drink."

"Conceited tatter of fur! What makes you think you have the right to decide what blood you'll drink and what you won't?"

The familiar looked up at her with big, reproachful eyes. "Do not tease Dickon so cruelly. You hate Dickon. As soon as you have finished tormenting him, you and your fierce cat will slay him."

"Chittering little know-it-all!" hissed Mother Jujy, so furiously that the familiar shrank from the sound. "Do you presume to dictate the actions of your betters? You'll drink Grimalkin's blood and like it!"

And she snatched up the almost weightles familiar by the scruff of the neck. Grimalkin, however, as if sensing that her mistress intended to involve her in something unpleasant, retreated along the tunnel. And at the same time the familiar piped shrilly, "A cat's blood would slay Dickon as surely as a cat's claws. Even your blood, Mother Jujy, might slay him."

For a moment it appeared that Mother Jujy was going to bat the limp familiar down the tunnel, after the cat, with her cane.

"Not good enough for you? Not good enough for you?" she screamed in a voice strangled by indignation. "Mother Jujy's blood not good enough for a filthy, shriveled manikin? Here quickly now, before Mothey Jujy beats you to a pulp and makes Grimalkin a red jacket of your fur!"

And she jerked at her neck, exposing a sallow, bony shoulder.

"Mother Jujy means it?" asked the familiar faintly, peering at her from where he dangled helpless in her hand. "She is not deceiving Dickon?"

"Call me a liar now?" screeched the old witch. "One more such question, and will I deceive you! I'll deceive your head in with my cane! Feed, filthy manikin!"

And she applied the familiar to her bare shoulder.

For a few seconds there was silence. Then Mother Jujy jerked nervously. "You tickle," she said.

"Your skin is tough, Mother Jujy," the familiar paused to explain apologetically.

Again it appeared that Mother Jujy was going to hurl him down the tunnel. She almost danced with rage.

"Tough? Tough? When she was a girl, Mother Jujy had the softest skin in all Megatheopolis! Obscene, sexless puppet! Merely to touch it honors your degraded mouth!"

Her furiously scathing comments died to a muttering, which stopped. For a long time the chill, dank silence was broken only by the low, jealous mewlings of Grimalkin, who paced in the shadows, lashing her tail, murderously eying her mistress' new pet.

At last the familiar lifted his head. Now all his motions were rapid and curiously sprightly.

"Dickon feels light as air," he chattered shrilly. "No task is too difficult for him." His tone grew respectful. "It was very, very good blood, though seething with strange emotions. It did not hurt Dickon at all. Oh, Mother Jujy, how will Dickon ever repay you? How will his brother and his brother's companions ever discharge their debt? It is far beyond Dickon's calculating what your kindness may have accomplished. Dickon has no words to describe—"

"What? Wasting time on palaver and flattery while the world waits on your errand?" interrupted Mother Jujy. "Begone!" And she brushed at him, albeit a little weakly now, with her free hand.

One queerly puckering smile he gave her. Then, with a gust of motion that set Grimalkin rearing back on her hind legs, hissing and clawing at the empty air, he was gone down the tunnel in the direction from which they had come.

Long after his wraithlike shadow had sped into the darkness, Mother. Jujy stood there watching after him, leaning heavily on her cane, droplets of wax dripping from the slackly held candle to harden and whiten instantly as they hit the cold floor.

"They might be able to do it," she muttered to herself, her voice heavy with an emotion she would have repudiated before anyone but Grimalkin. "Sathanas help them, but they just might be able to do it."

XVIII.

Slowly and with leaden steps, as if the very air had thickened to impede him, Jarles made his way toward his private apartment in the crypts. Ever since he had murdered Asmodeus, his mind had been fogged and burdened by a sense of black guilt which was all the more intolerable because he loathed and detested himself for feeling it.

Around him, pervading the whole Sanctuary, was the atmosphere of crisis, of agitation and fear, of frantic yet well-ordered preparations for unpredictable battles. Yet it did not touch him at all. Not one iota of it could penetrate the black cloud of conscience which clung around him, isolating him in a private hell.

In every corridor he was met or overtaken by hurrying priests whose alert yet anxious faces made it obvious that they were bound on official missions of pressing importance—lieutenants in the besieged army of the Hierarchy. Some of them glanced at him—respectfully or merely curiously, according to whether or not they knew of his recent exploits. But they meant nothing to him.

One stopped and tried to engage him in speech, a fat and ineffectual little priest of the Second Circle.

"I wish to congratulate you on your elevation to the Fourth Circle," he said hurriedly, twisting his chubby hands in a nervous and apologetic way. "Surely you remember me, your eminence. I am Brother Chulian—your old roommate—"

The fellow sounded as if he were screwing up courage to ask some favor. Or, perhaps, in the general flood of insecurity and fear, he was merely trying to assure himself of as many points of support as possible.

Jarles glared unpleasantly at his former companion and pushed past him without answering.

Damn them all, invoked Jarles, tortured by his inward burden. May they all die tonight. Let the Hierarchy fall. Who cares? Here am I, greatest of them all, greater than any archpriest—for am I not the one who killed Asmodeus, who destroyed the enemy leadership? Yet what good is it to me, what profit, if I am now to be chained to a senseless but insupportable misery as a result of my former contemptible weaknesses? So that instead of taking my rightful place beside the World Hierarch, I can only run to my room and try to shut out the world.

No goal in life has any significance, Jarles decided. Not power or pleasure or wealth. Not even the thrill of danger and treachery. Nothing is worth while, except to hate, to crush, to stamp upon life, to wreck upon a malignant world as much damage as one can.

Sharlson Naurya had told him that he would be tormented by conscience. Perhaps he would murder Sharlson Naurya. First awaken, then murder her. That might ease the corrosively acid emotions eating at his body and mind. The thought gave a little motive to his toilsome progress, quickening his steps.

The crypts were almost deserted. The raiding parties, which had combed the entire Sanctuary in search of Fanatics, were through with them. A few Fanatics had been slain, a very few were still at large—presumably escaped; the majority had been caught. Jarles had helped in the work of apprehending

them until his emotional turmoil had become unbearable. He had seen them locked away in the general prison of the Sanctuary—unconnected with the subsidiary prison used by Goniface for his captives before he had become World Hierarch and master of all.

As Jarles neared his apartment, his wretchedness abruptly increased, becoming stingingly acute. If there had been anyone to observe him, they might have thought him the victim of some painful and swift-acting poison, so convulsive and tortured were the expressions that succeeded one another on his face. To Jarles it was as if the heavy black fog of guilt oppressing his thoughts had suddenly come alive, acquiring a life of its own, writhing through his mind like an alien entity, engulfing his mind in a hideous embrace.

And it spoke to him, as if someone invisible were standing close beside him, whispering into his ear—closer even than that—"Do you hear me, Armon Jarles? Do you hear me? I am yourself. Run. Shut your ears. It will do no good. You cannot shut me out. You cannot keep from listening to me. For I am yourself. I am the Armon Jarles you have maimed and imprisoned, the Armon Jarles you have trampled and denied. Yet, in the end, I am stronger than you are."

And—crowning horror—it was not his own voice, though much like it. He was denied even the unsatisfactory resource—horrible enough in itself—of explaining it away as an hallucination, a projection for his own subconscious. It was too real, too individual, for that. It was like the voice of some close kin, the voice of some brother who had never been born.

As if all hell were at his heels, he dashed into his apartment and, with shaking hands that fumbled in their haste, reactivated the lock.

But inside it was worse.

"You cannot escape me, Armon Jarles. Where you are, there I am also. You will hear me until you die, and perhaps even the grave will not shut me out, perhaps even the cremator's flame will not end your hearing."

He stood facing the door, crouched a little, his hands frozen in the final position they had assumed while reactivating the lock. It was unearthly horror, unimagined torment. Never had he hated anything like that voice. Never had he so desired to crush, to tear apart, utterly to destroy something. Yet never had he been so helpless to accomplish an aim. Never had he felt himself so much the slave of his own detestable weaknesses and hated limitations. This moment, he feared icily, would prolong itself into an eternity. He would crouch here forever, observing the odd position of his white, rigid hands, listening to that voice, consumed by guilt and by a loathing of himself for feeling that guilt.

Then pictures began to form in his mind, memories and memory-fantasies began to project themselves against the black fog of guilt, like searchbeams on clouds, but without providing any relief at all for his trapped and manacled misery.

He was stumbling through the ruins, Mother Jujy's bony hand clasping his wrist. He wanted to cry out to the pursuers, to strangle her, to beat in her skull with her own cane. But he could not.

He was sitting at a rudely hewn table, sharing a humble dinner with his family. He had poisoned their food. Interminably he waited for them to take the first mouthful, but they were dawdling unaccountably. Then his mother lifted a spoonful of broth to her nose and sniffed. A suspicious look came into her eyes and she suddenly thrust her wooden bowl at him so that it half spilled over, and, towering above him, commanded, "Eat! Eat!" And then his father was beating him with a great stick, and although he knew he was much stronger than his father, he could put up only the feeblest and most ineffectual resistance.

He was in the laboratory of Brother Dhomas, but now—as it had seemed when he had first heard Sercival speak—everything was reversed. A man-shaped blackness sat in Brother Dhomas' seat, regarding him stonily, although the blackness hid the eyes. Evilly grinning witches and chattering familiars manned the various instruments. And they were doing everything that Brother Dhomas had done to him, but in reverse. Dragging him back, against time, into his own past. A force was wrenching at his mind, revolving it, but to that force he opposed every atom of a diabolic hate, slowing its revolution, stopping it by a grindingly painful friction, building up so great a tension that something must surely snap, rend, give way.

Suddenly then he was looking into a mirror, but instead of himself he saw the reanimated corpse of Asmodeus standing there. And Asmodeus was explaining something by gestures, first pointing at Jarles, then at the charred, gaping hole in his robe, over and over again. And when Jarles felt he could bear it no longer, Asmodeus stopped—but then the tiny head of a bloodstained, gaunt, and grayed familiar thrust itself out of the charred hole and began to repeat his master's gestures.

Jarles' hatred of life, of everything, rose to a peak. It occurred to him that it would be possible for a single man, if he worked subtly enough and unswervingly, to destroy the whole human race except for himself. It could be done. There were ways.

With a tremendous effort—he felt that his white hands were frozen fast beside the lock and he would have to tear himself away from them—Jarles turned around.

For a moment he thought the room was unchanged. Then, squatting on the gleaming desk, between the projector and the scattered spools of reading tape, he saw a loathsome beast, a dark-furred, peering familiar, whose face was a tiny, tapering, noseless copy of his own.

Instantly he sensed that this was the creature who was thinking the thoughts that were torturing him, who had brought to life the black fog of guilt, whose telepathically transmitted words were resounding unstoppably in his skull.

Instantly he determined to slay it. Not by wrath ray—his mental processes had already reached too primeval a level for that. He would strangle it with his bare hands.

It did not stir as he walked toward the table. It waited for him. But his progress was nightmarishly slow, as if the air had become a gelatinous medium. And as he walked, step by labored step, a final vision formed in his mind.

He was utterly alone, his fingers on the controls of a mighty war blast, at the summit of a little hill in the midst of a flat, gray wasteland. There was no life whatsoever, save his own. As far as eye could see—and it seemed he could see around the curve of the Earth—were the graves of the species he had annihilated, or perhaps the graves of all men and women, of all ages, who had suffered and fought and died seeking freedom, seeking something more than a jealous, conservative, senselessly ordered society could provide for them.

And he was very much afraid, although there was nothing left to threaten him. And he kept wondering if his war blast were sufficiently powerful.

Only a few steps separated him from the desk. His hands were outstretched like talons of marble. The hateful thing was peering at him, peering. But the vision kept coming between them.

Suddenly the wasteland began to ripple and shake. Like an earthquake, except the motion was more general and less violent. As if a million moles were tunneling. Then, here and there, the gray earth cracked and parted and there rose up a host of skeletal forms, clad in moldering flesh and tattered cerements. Like an army they marshaled themselves and advanced from all sides upon the hillock, shaking gray earth from them as they came.

Round and round he slewed his ravening war blast. Down they went, by scores, by hundreds, like ripe grain, like rotten grain, collapsing into a second death. But over them, through the smoke of their burning, stepped hundreds more. And he knew that thousands of miles away still others had risen and were marching toward him up around the Earth.

One step more now and he could lean forward. His hands would close around the scrawny throat. Only one step.

Still they came, marching in perfect order, and the stench of their burning obscured the leaden sky and choked him. Now their fallen made a great ring higher than the hillock, and he had to swivel his war blast upward to cut down the figures who came lightly stepping over the crest—except when he must sweep it briefly downward to finish off a charred skeleton crawling or hitching itself toward him from the heap.

He was at the desk. His marble hands were closing in on the black caricature of himself.

But on him the others were closing. Waves and waves of them. He was sweating, panting, choking. Each time he frantically slewed round his war blast, the ranks he mowed down were a little closer. And one blackened skeleton had gotten inside his range and was weakly clawing at his ankle with charred-off phalanges.

His hands closed around the throat of the furry abomination. But it was as if it wore a collar of transparent plastic. He could not quite touch the black fur. One supreme effort—

Then, even as a skeletal phalanx dissolved at the muzzle of his war blast, hands of bone seized him from behind and, in a paroxysm of terror, surrender, and ultimate guilt, he screamed, "I give up! I give up!"

At that instant a shock more profound than any electrical one tortured his nerves. In his mind there was a pounding and wrenching and shaking, as of machines broken loose from their moorings. With sickening suddenness his mind seemed to revolve and to come to rest with the impact of a concussion.

Consciousness darkened, but did not quite fade.

Memory strands were strained to the breaking point, but held.

His eyes, screwed shut at the final moment, opened.

He was Jarles. He was the old Jarles. The Jarles who had defied the Hierarchy singlehanded. The Jarles who had refused the shelter offered him by the Witchcraft because he feared that their methods were not sufficiently impeccable. The Jarles who had fled from a merciless mob, who had endured sickness in Mother Jujy's cramped wall bed, who had by hard, bitter thinking become reconciled to the Witchcraft. The Jarles who had served ideals and ideals alone—served them all too well.

But that realization brought no relief. On the contrary, it was the beginning of a new agony, less endurable even than that which he had just undergone. For memory was intact. He remembered every action of the secondary personality—the betrayal of the Witchcraft, the kidnaping of Sharlson Naurya, the taunting of the Black Man, and, above all, the murder of Asmodeus. Those were his actions. He was responsible for them. He had done more than any single man to insure the continuance of the Hierarchy's hateful tyranny. He still felt the full force of his guilt, only now, instead of loathing it, he believed that it was right and just.

There seemed to be only one solution, and he was irresistibly driven toward it. With a tortured, incredulous gasp he snatched away his hands from the familiar's throat and slitted open his robe, preparing to turn the Finger of Wrath upon himself.

But that grim release—not so much suicide as the carrying out of a self-imposed death sentence—was denied him.

"Expiation, Armon Jarles! Expiation!" sternly resounded the inner voice. "You must first make atonement for your guilt."

At the same moment there scrambled lightly up from behind the desk a second familiar. Coppery fur and a distorted facial resemblance proclaimed him the Black Man's twin. Even his voice was a squeaky echo of the Black Man's.

"I am Dickon, Armon Jarles. It is I who have spoken to you through the mind of your little brother, just as my big brother instructed me. But my words were shaped in your little brother's brain to a resemblance of your own. All three of us have touched minds.

"There is no time to lose. You must rescue my big brother. You must release him from his cell."

A third familiar sprang up from behind the desk. Jarles' dumfoundment was complete. The inky creature bore an unmistakable, eerily hideous resemblance to the World Hierarch Goniface.

For a moment he felt that by some incredible sorcery every human being in the whole world had been transformed into a chattering puppet, and that he, the only man left, was their prisoner and slave, a giant constrained to do their bidding.

His mind was still churned by the aftermath of a mighty tempest. The barriers between its various portions were still down. Large areas normally submerged in the eternal night of the subconscious, were exposed to view and frighteningly jumbled with the conscious areas. Like a child in whom memory has not yet firmly established itself, Jarles felt that realities were but the symbols of unseen powers. There was no clear demarcation between objective and subjective, between himself and the world. Behind everything, dangerous forces lurked. Mightiest and most powerful of them all, a black something that towered behind him—conscience, the superego. In the fleeting, fearful glimpses he caught of it, it always seemed to wear a different face—sometimes his father's or mother's, sometimes Sharlson Naurya's, sometimes the Black Man's, sometimes the severe, hawklike visage of Asmodeus. But no matter how its appearance might change, it maintained as terrible an ascendancy over him as if it controlled him by leash and whip.

"Haste! Haste!" cried Dickon, tugging at his robe.

Jarles obeyed. Soon a priest of the Fourth Circle was striding hurriedly through the gloomy gray corridors of the crypts. The grim superstitions of an earlier age might have conceived him to be a zombie, so white was his face, so set was his expression, so stiff and mechanical his strides. And Jarles did feel that he had been summoned back from death by a will more powerful than his own. Sometimes he felt that he was walking to his doom. Sometimes he felt that doom walked with him, that he himself was doom's agent.

Through the ponderous metallic doorway of the subsidiary prison, the turnkey viewed Jarles, satisfying himself that this was one of Goniface's principal agents.

The doorway slid aside, then swiftly closed behind Jarles. He turned toward the booth. The turnkey started to question him about his business. Jarles' hand came up and he directed at the turnkey and his assistant a paralysis beam.

Then he reached forward and withdrew the activator of the locks from the little square box at the turnkey's waist.

Like a figure of wax the turnkey stood there, his open lips forming a question that was never uttered. While behind him sat his assistant, one eyebrow raised in an unchanging expression of casual curiosity.

Down the prison corridor Jarles strode to the single cell in view of the booth. The two deacons guarding it had noticed, but had misinterpreted, the action which had taken place at the booth. They recognized the Fourth Circle priest who was approaching. More than once he had come here to conduct ironic and rather unpleasant conversations with their prisoner. So with looks of obsequious and respectful recognition on their faces, they were frozen by the paralysis beam.

Adjusted by Jarles for this call, the electrical emanations from the activator played on the lock.

Slowly the cell door slid aside. At first only a hand could be seen—a hand that groped unsteadily at the wall of the cell, as if its owner were steeling himself to face and endure a terrible disappointment. Then the entire figure came into view.

Physical injury and psychological strain had taken their toll of the Black Man. Pale, almost shrunken, he appeared in his gray prison tunic. A strange light, close to madness, burned in his darkly circled eyes.

And, indeed, in his mind there was a mad despair. For hours he had been tortured by doubt, but now that Jarles was come, he suddenly realized that he dared not hope that his plan had worked. He saw it now for the fragile, harebrained scheme it was, based on a familiar's limited cunning and his own knowledge of Brother Dhomas' methods—and the wild, desperate fancy that he could employ that knowledge to turn the tables in the case of Jarles. There were a hundred points where that scheme might have failed.

No, Jarles had only come to taunt him once more. The cold, wooden look in Jarles' eyes seemed to confirm this. Besides, the guards were sitting there as if nothing had happened. The scheme had failed.

"I have murdered Asmodeus," he

heard Jarles say, and despite the strange tonelessness of the statement, it seemed to the Black Man a final confirmation of his fears. Despairingly, he gathered himself for a lunge into the corridor. Knock down Jarles—try to seize a wrath rod—best die trying to do *something*.

Then—rush of a coppery shadow, and before he knew how it had happened, Dickon was clinging to the breast of his tunic and plucking gently at his face.

"Brother, oh brother," the tiny voice was piping, "Dickon has done what you commanded. Dickon's brother is free, free!"

And even as he sought to grasp the simple meaning of those words, he heard Jarles repeat, in the same almost formal tones, as if he were making a statement before a Hierarchic court of law, "I have murdered Asmodeus—"

The Black Man could not understand. For a moment he wondered crazily if this were some strategem of Brother Dhomas to unseat his reason. Then Jarles added—"who, as you know, was the Fanatic Archpriest Sercival."

When amazement is piled on amazement, there comes a point when it touches off the impulse toward hysteria that lurks in every human being—and especially in one whose mind has endured abnormal stresses. As if at some stupid, pointless, yet unbearably ludicrous joke, the Black Man began to laugh.

And it was his own laughter that brought him to his senses. Laughter was a dangerous thing—it might bring guards. He clapped his hand to his mouth, hardly realizing that Dickon's had already been laid there, warning him to be silent. Incredulously, he stared at Jarles. There were a hundred questions he wanted to ask.

But his senses were back, and they told him that explanations and understanding were luxuries at such a moment of crisis as this must be. Whatever Jarles had done, Jarles had freed him. And now there was another job to do. A job of the most pressing sort. Explanations and understanding could come later.

"The other captive witches—" he asked.

"—are still imprisoned here," Jarles answered.

A few moments more and Jarles was again striding down the prison corridor. Beside him walked a figure draped in a deacon's robe, face shadowed by black hood, hands gripping a wrath rod.

The corridor made a right-angle turn. Before them stretched a block of cells, two deacons stationed at each door. Down that corridor they paced, and the almost inaudible hissing of a paralysis beam accompanied them. The last three pairs sensed danger, but too late. They were frozen in the act of reaching for their wrath rods, stacked against the wall. The last pair were actually lifting theirs to take aim, but in that position they remained.

The Black Man threw back his hood.

A door across the corridor opened and through it stepped Cousin Deth. In the next moment he proved Goniface's wisdom in having chosen him as chief agent in matters requiring quick thinking. With almost incredible swiftness he recognized the situation and directed his wrath rod at the Black Man and Jarles.

But a familiar's reactions are swifter than a man's. In a blur of movement Dickon scuttled at him across the floor.

Deth's sallow face was contorted suddenly with a fear that had only been there once before—when he fled panic-stricken from the haunted house.

"The thing in the hole!" he cried hollowly. "The spider!"

A moment more and he had realized his misapprehension, had regained control of himself, as the violet needle of his wrath ray was swinging down at Dickon.

But the Black Man had gained time to act. His own wrath ray lashed out, swished into that of Cousin Deth's.

Since the two rays were mutually impenetrable, unable to cross through each other, Deth's was fended off from Dickon.

Like two ancient swordsmen, then, the warlock and the deacon dueled together. Their weapons were two endless blades of violet incandescence, but their tactics were those of sabreurs—feint, cut, parry, swift riposte. Ceiling, walls, and floor were traced with redly glowing curlicues. Paralyzed deacons, seeming like spectators frozen in amazement, were burned down where they stood or stooped or sat.

There was a smile on Deth's face—a cruel and sneering one, but not altogether unpleasant. The deacon disliked danger, but when it came in this particular form he could meet it with a certain grace.

And on his adversary's face there was no smile—at first. Then, by quick stages, one appeared. A devil-may-care, all-challenging smile.

It seemed to the Black Man that, with every blow he struck, with every hot slash of violet incandescence he fended from his body, a little of his old vigor and verve returned, a little of his prison misery and prison hopelessness were sloughed off, a little of the distortion that Brother Dhomas had effected in his mind was wiped away until—when the end came—he was his old self, laughing at danger—but with the laughter of wily daring, not of recklessness—seeing in everything a jest, and in life the biggest and most serious jest of all.

And the end came swiftly. On a whirling disengagement, Deth's blade ripped burningly through the slack of his robe, under his arm. But he parried in time. Instantly he feinted one riposte, made another, and the sallow face and swollen forehead of Cousin Deth ceased to exist.

Fending off the beam of the wrath rod that slipped from Deth's fingers, he hurried forward and switched off both weapons.

Then he turned to Jarles, who had stood motionless against the wall all through the fight, inviting destruction. He ordered Jarles to activate the locks.

But he wasted not a word on his captive fellow witches, as they emerged wonderingly from their cells, like ghosts summoned from the Underworld, hardly seeming to comprehend what had happened. Even Drick he turned away with a quick headshake. His every effort was concentrated on drawing from the seemingly hypnotized Jarles a terse account of the recent events which had shaken Megatheopolis.

It was the fight with Cousin Deth all over again, on a mental and emotional level. At first he felt only an overpowering hopelessness. The Witchcraft was finished, its leadership had been destroyed and could never be adequately replaced. Things had gone too far. They had gotten too big. They were out of control. It was too late.

Then, like Deth's sword slashes, each new fact mechanically recited to him by Jarles began to strike sparks from his mind, until—almost before he realized it—he was seeing and directing in imagination the whole world conflict between Witchcraft and Hierarchy.

No, it was not too late. At least, it might not be too late. And even if it were it was his job to lead the liberated witches out of the Sanctuary by the secret way he knew, and conduct them to the Megatheopolis headquarters of the Witchcraft, hoping those headquarters had not yet been discovered by the Hierarchy, and to take over the work of Asmodeus—whoever Asmodeus might have been! Win or lose, impossible or not, those had been his instructions!

Jarles was activating open the last lock. The Black Man noted that the hitherto set expression on the face of the twice-renegade priest was beginning to cloud a little, like a man recovering from the actions of a narcotic drug.

Haltingly, with the effortfulness of a

man who begins to realize what enormous crimes he must make amends for, Jarles said, "I can take you to where the Fanatic priests are imprisoned. We can attempt to release them and to seize the Sanctuary."

Almost, the Black Man was tempted. His duel with Deth had put him in the mood for such a venture. Wrath rods were stacked all along the corridor. There was something attractively daring and satisfying in the idea of arming the witches with them, surprising the Sanctuary by a sudden sally, carrying all before them by the unexpectedness of the attack, burning down all who stood in their way. And if they failed, to go down with rods flaming.

Yes, like a spent rocket. Romantic, perhaps, but painful, and, above all, foolish. Even if they did manage to capture Megatheopolis Sanctuary, it might very well be at the expense of losing the whole world.

It was in world terms that he must think, the Black Man reminded himself harshly. In more than world terms.

Wrath rods were not witches' weapons. Asmodeus had banked everything on fear. And, therefore, it was by fear alone that the world wager could—must—*would* be won!

Again Jarles spoke. He seemed to the Black Man to be groping for the solution of some profound inward problem. "If you desire it," he said, "I will attempt to assassinate the World Hierarch Goniface."

"By no means!" the Black Man answered, hardly certain yet whether he should treat Jarles as a sane man or not. "Operations of a very different sort are intended against Goniface. If only I knew what has happened to Sharlson Naurya—"

"She lies in my apartment," said Jarles dully, "under the influence of a paralysis beam."

The Black Man stared at him. He was only now beginning to realize what an utterly incredible accomplice he had in Jarles. Then he laughed, the brief laugh of a man who suddenly understands that the incredible and the inevitable are sometimes the same thing. He had to trust Jarles, for tonight Jarles was destiny personified—blind, incredible destiny.

"Return to your apartment," he ordered Jarles. "Rouse her. Tell her we proceed with the operations against Goniface as planned. Aid her in reaching the vicinity of his apartment without being detected. Take with you Goniface's familiar and your own."

Then he turned and motioned to his witches and warlocks to follow him.

XIX.

With a small escort, Goniface was returning to Web Center, having completed a hurried tour of the principle control points in the Sanctuary. Tonight the Apex Council was sitting at Web Center. His place was there. But to maintain some direct touch with local developments was one of the World Hierarch's cardinal principles of action. It insured against loss of perspective.

From Chief Observation Post, high above the other structures of the Sanctuary, he had watched a small black shape—apparently one of those devil constructions which had appeared at the Grand Revival—dart waspishly around the image of the Great God above the Cathedral, like a tiny, frail aircraft attacking a giant. Again and again he had watched it evade, by unexpected twists and turns, the blue warblast beam projected from the Great God's hand.

That flitting shadow was a black flag of revolt for the Commoners, who tonight were defying the age-old curfew regulations. The great mob which rioted at the Grand Revival had broken up into gangs which roamed the narrow streets, attacking the Hierarchic patrols or setting traps for them. Their peasant brutality, repressed for generations, had a peculiar ghastliness, which was only augmented by their belief that they were taking part in a great supernatural conflict, that they had joined forces with the Lord of Evil and were thereby released from all restraint. The few priests or deacons they caught died hideously. One of their unsuccessful strategems was an attempt to lure a patrol into a house packed with combustibles and to shut them in and burn them. Showing surprising ingenuity, another gang, composed apparently of members of the mechanical trades, had managed to construct and set up a catapult in the Street of the Smithies. They actually succeeded in lobbing a few paving stones into the Sanctuary, one of which brained a First Circle priest, before an angel discovered and destroyed their crude artillery.

A little later Goniface had seen the devil construction attempt too close a turn, fail to escape the blue beam, flare into red-hot incandescence, and crash in the Square. But as he was leaving Chief Observation Post he noted that another bat-flitting shape had taken its place.

Power Center reported all well. The atomic generators which served the whole Sanctuary were easily handling the increasing energy demands of the emergency. The morale of the Fourth Circle priests on duty there, and of their Seventh Circle supervisor, seemed good.

Cathedral Control Center, where the Fanatics had sabotaged the Grand Revival a few hours earlier, also seemed to be functioning adequately. The chief technician reported the second devil construction destroyed. But as Goniface was leaving, a third black shape ducked into their view panel and they busied themselves with the problem of bringing the Great God's flaring wrath to bear on it.

At Sanctuary Control Center, adjoining Web Center, an unpleasant incident occurred. In a queer mental seizure that was all the more disturbing because at first it had no outward symptoms, the Master of Locks and Guards began to activate open all main gateways leading to the Sanctuary. His action might readily have escaped detection. It was Goniface himself who first noticed the telltale configuration of lights on the Locks-and-Guards control panel. When the priest realized that he had been detected, he babbled wildly of some hideous doom with which Sathanas had threatened him if he did not obey certain commands. Apparently he was in no sense a real traitor. As far as could be made out from his confused story, he had been terrorized for weeks by strange manifestations which appeared to him when he was alone. He claimed that since childhood he had been vaguely haunted by a fantastic fear—that floating globes of fire would burn his skull and destroy his brain. This fear had been a shadowy thing, and in later years he had forgotten it—but then small floating globes of fire had manifested themselves to him, moving purposefully through the air and speaking to him in human voices, threatening to burn his brain if he did not perform certain actions.

Goniface saw his place taken by a competent-looking substitute, but the incident left an unpleasant taste. It typified all too well the intimate and insidious strategy of the Witchcraft. The Fanatics had moved freely among the loyal priesthood, and had had access to the dossiers of practically all members of the Hierarchy—two of the clerks in Personnel Control had been Fanatics. As a result they had been in a position to discover the secret, deep-buried fears of individual priests.

There was no priest without such fears. They were the natural relics of a childhood spent as a superstitious Commoner. Normally they were submerged, forgotten. Except as quickly banished memories, or as routine data in psychological examinations, they never came up.

But if you know a man's secretest fear—the thing that terrorized him as a child although he now would be ashamed to mention it—and if, further, you have the scientific means to reconstruct and manifest to him the object of that fear, then you are well on the way to controlling him, to making him your fear-ruled puppet.

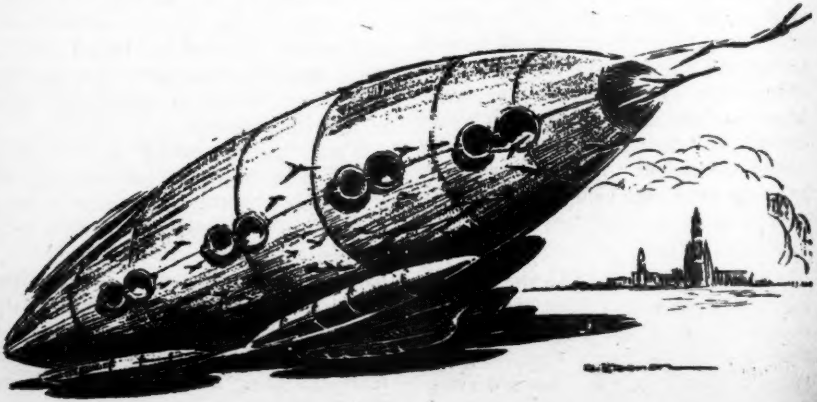
Yes, thought Goniface, that was the Witchcraft's secret weapon, and the only one spelling real danger. All other threats were distinctly subordinate. Direct attack on the Sanctuaries would fail, since the Hierarchy held more than the balance of military power. Rousing the Commoners to revolt had achieved considerable confusion; it would take years to restore them to their old docility. But as for immediate strategic significance, the revolt of the Commoners was only of nuisance value to the Witchcraft. The Commoners could no more overrun the Sanctuaries than a band of apes could have taken a walled city.

But fear—that was a different matter. Goniface conned the faces around him for signs of it. It was impossible that the Witchcraft could be victimizing all members of the Heirarchy with individual terrors—to do that would take an organization as large as the Hierarchy itself. If there were only some swift and sure way of determining which priests had been specially victimized. It could be done, given time. Tomorrow— But first the Hierarchy must survive tonight.

Dismissing his escort, Goniface entered Web Center by way of the gallery. He did not at once take his seat, but tarried just inside the gallery door, watching. In the absorbing and ceaseless surge of activity, his return was not immediately noticed.

Web Center was like a brain. The floor space was occupied by communication panels, at each of which sat a priest. One section of these co-ordinated and verified the information pouring in from the world network of Sanctuaries. This information then appeared on the world map which took up the entire wall, slightly concave, opposite the gallery. From the gallery the members of the Apex Council conned the world map, received additional information through secretaries and runners and individual televisor panels, and made their decisions. Each archpriest was responsible for a definite sector of the Earth. Their orders were handed down to the priests of the Web Center Staff, who sat directly in front of the gallery. They checked the orders and passed them on to the section of priests handling outgoing messages.

Apex Council and Web Center Staff co-operated admirably. There was a minimum of friction. Some of the arch-



priests were serving on the Staff. Tonight Brother Jomald was Chief of Communications and, in Goniface's absence, exercised supreme authority.

There was almost no noise or bustle. This was made possible by an elaborate code of gestures, amounting almost to a language, and the general use of earphones, whisper transmitters, and old-style written messages flashed by televisor. But the impression of tension and of furious mental activity was thereby only increased.

At either end of the room were grouped large televisor panels, one for each key city.

But it was the huge world map that dominated Web Center and gave it its special character. Projected in glowing colors from the other side of the translucent wall, it seemed almost a live thing. And, indeed, if one closely watched the region of faint shadow covering half the map, one could discern its very slow movement. That region of shadow represented night. Slowly its forward margin crept across ocean and land, engulfing the dots representing Sanctuaries. Slowly its rearward margin withdrew from others. Megatheopolis, at the center of the map, was also at the present moment approximately at the center of the creeping blanket of shadow.

Most of the dots on which the shadow encroached were scarlet. Many of those from which it withdrew were black. The change indicated that those Sanctuaries had stopped communicating, had presumably been deserted or fallen to the Witchcraft.

Fully half the tinier dots, which represented rural Sanctuaries, were black. Most of the larger dots were still scarlet.

Looking at the map, Goniface felt the realm of his imagination expand with almost dizzying swiftness. Each of those scarlet dots represented, with variations, a conglomeration of such scenes as he had been witnessing outside, or had recently occurred at Megatheopolis. At some of them, near the noontime band at the edges of the map, Grand Revivals were being held—with precautions suggested by the disastrous experiences of Megatheopolis. At others, Grand Revivals had been called off. At all of them, members of the Fanatic Party had been seized or were being hunted down.

He studied the map more closely, noting the disposition of the tiny blue-wing symbols representing squadrons of angels, the black batwing symbols that had been improvised to indicate devil constructions, the gray, wolflike diagrams marking regions troubled by enemy solidographs, and all the other meaningful pictorial hieroglyphs of the map.

As he studied it, he frowned. Indubitably the Witchcraft had been making progress—swifter progress. He sensed a better co-ordination of enemy forces, a more unified plan of campaign. They were taking clever advantage of the fact that the Hierarchy lacked sufficient angel squadrons to patrol all key cities.

Tomorrow the ship from Luciferopolis should land, carrying fifty angel squadrons, besides a number or archangels and seraphim, of which there were none here. But that was tomorrow.

He walked to the center of the gallery and took his place, annoyed rather than flattered at the stir created by his arrival. They were all too conscious of him. They should be more completely absorbed in their work.

From the dais of the Chief of Communications directly below the World Hierarch's box in the gallery, Brother Jomald started to recount recent developments. But Goniface, having discerned most of them from the map, signed Jomald to wait. He put a question to one of his secretaries.

"I sent for Deth. He should be here."

"We have been unable to contact him. We are checking all likely points."

Goniface did not betray his surprise,

or the apprehension which tinged it.

"The Fourth Circle priest Jarles?" he continued. "I sent for him, too."

"We are checking."

He dismissed the matter from his mind. Now that his return had been noticed, the archpriests and staff members were shunting over to Goniface reports on critical sectors with requests for advice. It kept his secretaries' hands full sorting them out and presenting them to him.

"Mesodelphi invaded by blackness. Shall detach half squadron angels from Archeodelphia to render assistance?"

"Eleusis reports telesolidograph discovered and seized. Do you want details on construction?"

"Hieropolis—atomic generators failing. Can spare power from elsewhere? Or send trained technicians to supervise repairs?"

"Sixth Circle Faculty of Olympia sends urgent message over private communication channel, warning that Olympia Control Staff is being mentally influenced by Witchcraft. Instructions?"

"Rural Sanctuary 127, East Asian Sector, reports mysterious crash of two angels. Glimpses of vast, batlike form. Shall warn all angels from sector?"

"Relief ship from Luciferopolis contacted. Will arrive approximately dawn, Megatheopolis Time. Shall land at usual port?"

Too many reports. Too many requests for advice. Time and again Goniface made, across the room or into the televisor, the curt palm-upward gesture which signified, "Handle at your own discretion. Use your own judgment." They ought to know better than to ask for advice on such matters. His being World Hierarch made them overanxious for his approval. Even with highly capable men like Jomald it made a difference. They were taking too slavish an attitude toward Goniface and his judgments. Yet in their present state of fear, most of them had to have someone whom they felt would take care of them, who would assume final responsibility. A vicious circle.

He did reply, however, to the last request.

"Instruct relief ship from Luciferopolis to land openly behind Megatheopolis Sanctuary on Blasted Heath, prepared to give instant assistance."

Was the Hierarchy growing old, Goniface wondered—while another part of his mind was immersed in the business of the moment. Was the priesthood losing its vigor, its stern strength of purpose, its cold joy in rulership? Everywhere he fancied he could detect an undercurrent of laxity, of weakness, of escapism—as if most of them wanted to drop everything, to give way to fear and tiredness and personal emotions, and were flogged on only by habit and social pressure.

Perversely, it irked him that he no longer sensed jealousy and bitter rivalry in those around him. The Apex Council was not as it had been in the old days, when every archpriest was grasping at prestige and increased authority, and when each session was a brilliant duel of wits. Gone was the keen yet realistic competition for personal power, which had been one of the chief driving forces of the Hierarchy. His chief rival, Frejeris, was out of the picture, as good as dead, and he knew that even the strongest of the Realist leaders besides himself had given up any plans they might have had for supplanting him. They were content to accept him as master. They had no desire even to share his power and his responsibilities. He had succeeded almost too well. Alone he sat on the World Hierarch's throne, and no one wanted to push him out of it. In vain he searched in those around him for an overpowering ambition akin to his own. Nowhere could he find it. As a result his own ambition, satisfied now and unchallenged, was becoming an empty, futile thing, curling up because it could find nothing to beat against, functionless in the present situation.

Oddly, it was in his traitorous agent Jarles that Goniface had last sensed a rapacity and driving force akin to his own—even though cruder and more naïve. He wished Jarles would come. It would give him an obscure exhilaration to know that the cold, treacherous little cokerel was standing beside him, envying him. Perhaps, after the present crisis, Brother Dhomas could fabricate a few more such personalities to supply the animal vitality and ruthless self-interest which the Hierarchy had lost.

Morbid fancies! Ridiculous and suicidal, too, in the present crisis, when discipline and obedience were essential. Yet they kept troubling the under surface of his mind.

He noticed that the booth to his left, the one Sercival had always occupied, was empty, and he impatiently motioned the next archpriest to transfer to it. Bad for morale to have that reminder of the enemy who had so recently been discovered in their midst.

Yet as soon as the archpriest had obeyed his order, he wondered if he ought to have given it. Something in his mind kept wanting to transform the man's thickish face into Sercival's lean, hawklike one. And there was still an empty seat—

What had Sercival—Asmodeus—been after, really? Goniface would have given a great deal to have heard him answer that last question. Why had he wanted Goniface to achieve supreme authority? Had he foreseen the feeling of purposelessness that would trouble Goniface once his personal aims were achieved—the dry rot of slavish obedience that would begin to eat at every other member of the Hierarchy? That seemed too devious a sort of reasoning. There had been autocracies and tyrannies before this, and they had endured. But were they autocracies in which all rivalry was dead?

Above all, why had Sercival died keeping up a silly pretense of believing in the supernatural? Could he have been a senile dodderer after all? Impossible! The leader of the Witchcraft had proven himself a man of astonishing energy, daring, and resourcefulness. It must be assumed that Sercival had acted as he had in order to maintain the prestige of the Witchcraft, devoting his dying moments to a final effort to shake the skepticism of the Apex Council. But, according to Goniface's experience, dying men didn't do that sort of thing —or at least didn't do it so well.

The man had been so diabolically sincere! "Sathanas, receive . . . my . . . spirit," and all that! Was it possible that Sercival had believed his own words, *had had reason to believe them?* After all, to the truly skeptical mind, diabolic forces are just as reasonable building blocks for the cosmos as mindless electrons. No possibility, however seemingly fantastic, should revolt the truly skeptical mind. It all depends on the evidence. The evidence decides everything.

Suppose Sercival had had access to avenues of evidence which are denied most men? Suppose that, under the scientific mummery of the Witchcraft—seemingly identical with the scientific mummery of the Hierarchy—there was really something else? The mummery proved nothing. No reason why diabolic forces shouldn't sometimes make use of mummery to achieve their ends if they chose to. "It is a matter of indifference to Sathanas . . . what methods his followers employ. On occasion . . . he does not scruple . . . to use science . . . to defeat science."

These dubious underthoughts were swept from Goniface's mind by the reports coming in from Neodelos. The situation there had reached a crisis. Half the priesthood of Neodelos was incapacitated by panic or by subtler manifestations of fear. Horrible phantoms stalked its corridors. Invisible voices made frightful threats.

Neodelos was the first of the key cities to come to final grips with the Witchcraft. It was also the first city where the counter measures devised by Goniface would receive a thorough test. All the priests at Web Center, over and above their own work, were conscious of the messages flashing at frequent intervals on the Neodelos televisor at the end of the room. Depending on the import of those messages, their feelings rose and fell.

"Neodelos Control Center calling Web Center. Power Center here reports a disturbance. Two technicians incapacitated. Will ask for details.

"Report by runner—Cathedral Control Center here invaded by manifestations of some sort. Have no description except that manlike shapes accompany phantoms. Technicians have fled.

"Have ordered limited counterattack, in accordance with your instructions. Cannot contact Power Center. Deacons seeking to recharge wrath rods cannot reach Armory.

"Power failing. Have switched to reserves. Report by runner—devil constructions landing at Chief Observation Post.

"Still cannot contact Power Center. Uneasiness at Control Center. Three seizures.

"Lights failing. Anticipate general failure of power. Control Center crowded by priests fleeing something in corridor outside.

"Darkness complete. Are working by pocket illuminators. Have ordered general counterattack. Doors of Control Center opening. Gray shapes—"

The Neodelos panel went dead.

The gloom that last message brought to Web Center was something tangible. Goniface could sense a general slackening, a wave of fatalistic resignation. Though operations continued without interruption, there was a certain frantic haste apparent in them—an air of desperation.

"Neodelos Control Center calling Web Center! Counterattacks at Control Center and Power Center successful! Numerous witches slain. Others have retreated. Power Center reports sabotage by witches, but one atomic generator still in order. No word as yet from Cathedral Control Center or Chief Observation Post. Skirmishing continues. Will send further reports as they come in."

At Web Center that message had the effect of a reprieve from a death sentence. It was as if parasympathetics were suddenly flooding the room—the feeling of relief was so immediate and general. The large black dot which represented Neodelos on the world map blinked rapidly back to scarlet.

To a certain extent, Goniface was gratified. His counter measures were proving satisfactory. They were very simple, being based on one hard fact. So long as the Hierarchy held the principal control points in the important Sanctuaries, particularly the power sources, it could not be beaten. Likewise the Witchcraft, no matter how completely it depended on psychological weapons, must eventually attempt to take physical possession of those control points, after having terrorized the defending priests. At that moment the personnel of the Witchcraft became vulnerable to counterattacks or ambuscades by *unsuspected secondary defenders,* for whom the Witchcraft had no terrors prepared.

The plan seemed to be working at Neodelos.

And yet, looking around him, conning the work-absorbed faces of the priests at Web Center, Goniface had the feeling that something was lacking. Despite their obvious enheartenment at the outcome of the struggle at Neodelos, he had the feeling that deep in their minds was something that was disappointed, something that had wanted Neodelos to fall, something that wanted

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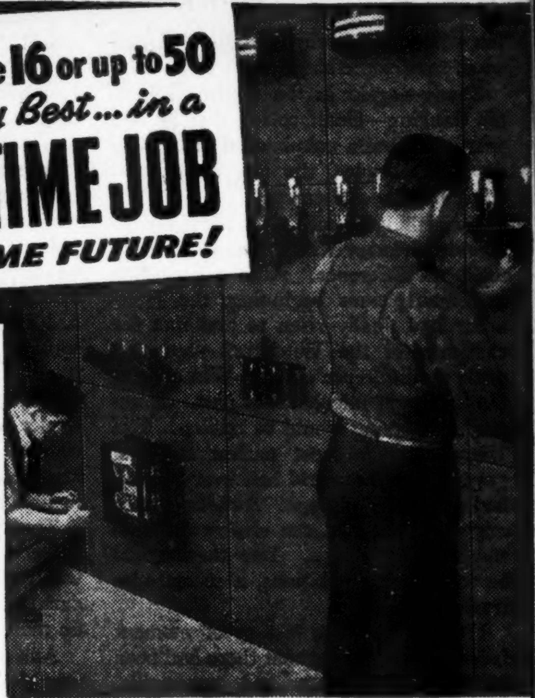

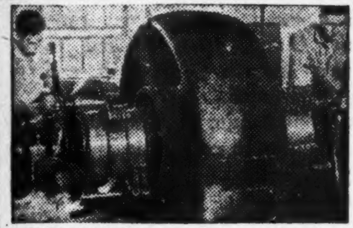

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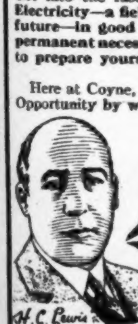
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the whole Hierarchy to fall—a frightened, tired something.

Dimly—again in the under levels of his thinking—Goniface felt that he had just witnessed a culmination of tremendous significance, the last truly great triumph of the Hierarchy.

Everything seemed with them now—complete victory within grasp—but that made no difference. After a hesitating and inauspicious beginning, the Hierarchy had finally risen to and met the challenge of the Witchcraft—but that made no difference either. Win or lose, the last great moment was past. Hereafter everything would be trifling. The Hierarchy, the most perfect form of government the world had ever known, had entered its old age. Ambitious men might come again, the rivalry for personal power revive. But they would be second-rate ambitions, a second-rate rivalry.

He had seen the last great moment fade, and even about that there had been something desperate and spasmodic, something that became unreal as soon as it was over, like the last rush of a dying carnivore or the last full exertion of physical strength a man makes before he becomes reconciled to old age and a thrifty husbanding of resources.

Irresistibly—though still in the under levels of his thinking—Goniface was driven to a realization of the parallelism between his own career and the recent destiny of the Hierarchy. For his own career had surely been a spasmodic and desperate thing. And now, looking back, it began to seem fantastically unreal. A wretched boy, son of a Fallen Sister and a priest, forced to take his mother's family name of Knowles, forever barred from the Hierarchy, most despised of the despised. Knowles Satrick—a seeming weakling, who shut himself up from the world as much as a Commoner's child could, hating with a terrible hate his family and especially the mother who had betrayed him by the very act of bringing him into the world, but getting only their contempt in return. Yet in that miserable boy had burned an ambition and a resentment so tremendous that they worked like destiny. Again and again he had murdered to cover up his past, but they had been no ordinary crimes—it was rather as if fate itself had mixed the poison or wielded the knife. For his ambition had held true. Becoming a Hierarchic novice at Megatheopolis, he had climbed with phenomenal rapidity up the complacent ranks, from First to Second Circle, from Second to Fourth, from Fourth to Seventh, and thence to the Council. And with every upward step his flaming resentment and ambition had been eased a little, though in no way diminished.

That was not the way a man rose to power in a healthy, vigorous state. It was rather like the fulfillment of some dark prophecy, like the stealthy, fatalistic march of an assassin.

And now that he had reached the top, now that he had created a single peak for himself where none had existed before—the World Hierarchship—he still felt the undiminished impulse to climb upward; yet, where the next rung of the ladder should be, was only emptiness. He looked down and there were none who grasped upward at him, no ambitious successors to struggle with. Even the Witchcraft was being beaten.

If only he could merge himself with the Hierarchy— But he felt that the Hierarchy, too, had reached its culmination.

Inevitably—still in that under level of thought, which was rising now to challenge his surface thoughts—Goniface was being turned back on himself, he was being driven back toward his own beginnings, as if to complete some mysterious circle. Irresistibly, his memories began to trend backward in time toward the carefully blotted-out period of his youth. He thought of the spiteful, irresponsible, grandiosely dreaming creature who had been his mother. Of his doltish half brother—

he had never known who his own father was, except that he was a priest. Of his confessor. But most of all of his younger sister Geryl. She had been the only one of them who had at all resembled him—in purposefulness and a certain somberness of character. And she might very well be alive—it had been a very convincing resemblance he had noted in the solidograph of the witch Sharlson Naurya. He gained a certain obscure satisfaction from thinking that she might miraculously have escaped from his murder trap and have devoted her life to accomplishing his downfall—the same sort of satisfaction he got from Jarles' jealousy and envy.

Knowles Satrick. Knowles Satrick. The name was repeating itself in his mind like a voice out of time's abyss. Come back, Knowles Satrick. You've gone as far as you can. Come back. Complete the cycle.

There was something very real about that voice. And something hypnotic about the name itself, like a winking point of light in utter darkness. It seemed to print itself on his mind in archaic black letters, over and over again. With a confused start, like a dozing man, he realized that his chief secretary was speaking to him.

"Sanctuary Control Center here desires to contact you. There are two separate communications. I believe you will want to attend to them personally. Shall I put them on your televisor?"

Goniface nodded. The familiar face of the Sanctuary Control Chief flashed into view. He looked grim, shaken.

"We have contacted Cousin Deth. His body was discovered at the subsidiary prison. The face had been burned away, but identification is certain. Some of the guards there had also been slain by wrath ray. The rest were paralyzed. The cells are empty. There is no sign of the prisoners."

For a moment Goniface felt only a kind of weariness, as if he had known about this long before. Deth's gone, Knowles Satrick, the voice seemed to say. The little deacon will smile no more on your enemies. But that's all right. He served his purpose. You don't need his help any more. You've gotten where you wanted to, and you can't go any further. It only remains to come back, Knowles Satrick. To come back.

The voice had the strangest effect, as if it were pulling at him, as if it were drawing him off in some undetermined direction—perhaps back across time. With an effort he half roused himself. So the prisoners had escaped? Yes, that would account for the better-co-ordinated plan of attack the Witchcraft had shown this last hour. They had gotten back a part of their leadership. But what did it matter? The Hierarchy was winning out at Neodelos. They were beating the Witchcraft despite its improved leadership.

He realized he was putting a question to the Sanctuary Control Chief. "Any news of the Fourth Circle priest Jarles?"

The face in the televisor grew more troubled. "Yes, your reverence, and in an unexpected connection. One of the guards has been revived. He asserts that it was none other than Jarles who engineered the escape! I will let you know what story the others tell."

The panel went blank as Goniface terminated the interview. He felt no resentment toward Jarles for his treachery, nor even toward himself for having trusted Brother Dhomas' handiwork too much—only a mild disappointment.

Jarles gone, too, the voice was saying. But what's the difference? All of them are gone, or have ceased to matter. Nothing matters any longer. Come back, Knowles Satrick. Complete the cycle.

The under thoughts had engulfed all except the most superficial portions of his mind, though he was still listening to reports, studying the world map, issuing orders, giving or refusing advice. The affairs of the Hierarchy seemed very far away—trivial, as though the Hierarchy were jog trotting down some unimportant bypath in time. Only the mystery of his personal destiny seemed to have significance. Knowles Satrick—Knowles Satrick— He would eagerly follow that voice if he could ever discover in what direction it was calling him—and if it proved to be a direction a man *could* follow.

The face of a minor priest appeared in his televisor. Vaguely he remembered that his secretary had mentioned a second communication from Sanctuary Control Center. At sight of Goniface, the minor priest drew back startledly. Then, apparently fearing that this might be interpreted as an affront, he grew haltingly apologetic.

"Your pardon, your supreme eminence. But I was sure, in spite of what they told me, that your supreme eminence could not be at Web Center. I handle communications for the portion of the Sanctuary which contains your apartments, and for the past few minutes I have been receiving messages from them. I have previously had the honor of hearing your supreme eminence speak, and I was sure that I recognized your voice, although the connection was not wholly satisfactory—"

"What messages?" asked Goniface.

"That's the strangest part of it, your reverence. Just a name. Repeated over and over again. A Commoner's name. Knowles Satrick."

To Goniface, in his present trancelike, visionary state of mind, this frightening coincidence seemed neither a coincidence nor frightening. It was something that, it seemed now, he had known would happen. So the voice was only calling him to his own apartments? He had expected a much longer journey.

What did surprise him a little was the casual sound of his own voice asking a question.

"You say you heard my voice coming from my apartments? You didn't see my face in the televisor panel there?"

"No, your supreme eminence, but I did see something else—something that perplexes me. I'll flash it on to you if it's still there."

The face of the minor priest disappeared. For a moment the panel was blank. Then Goniface was looking across his desk in his own apartment. Propped up so that its image filled the televisor panel, was a shadowy oblong of grayish paper, of the sort that Commoners used. On it he could make out the same archaic black letters that he had already seen printed in his mind. Knowles Satrick.

Goniface stood up, signing to Brother Jomald to take control temporarily. He felt very calm. It seemed to him the most natural thing in the world that he should go to his apartments to see what was written on the other side of the paper. More than natural. Inevitable. Preordained.

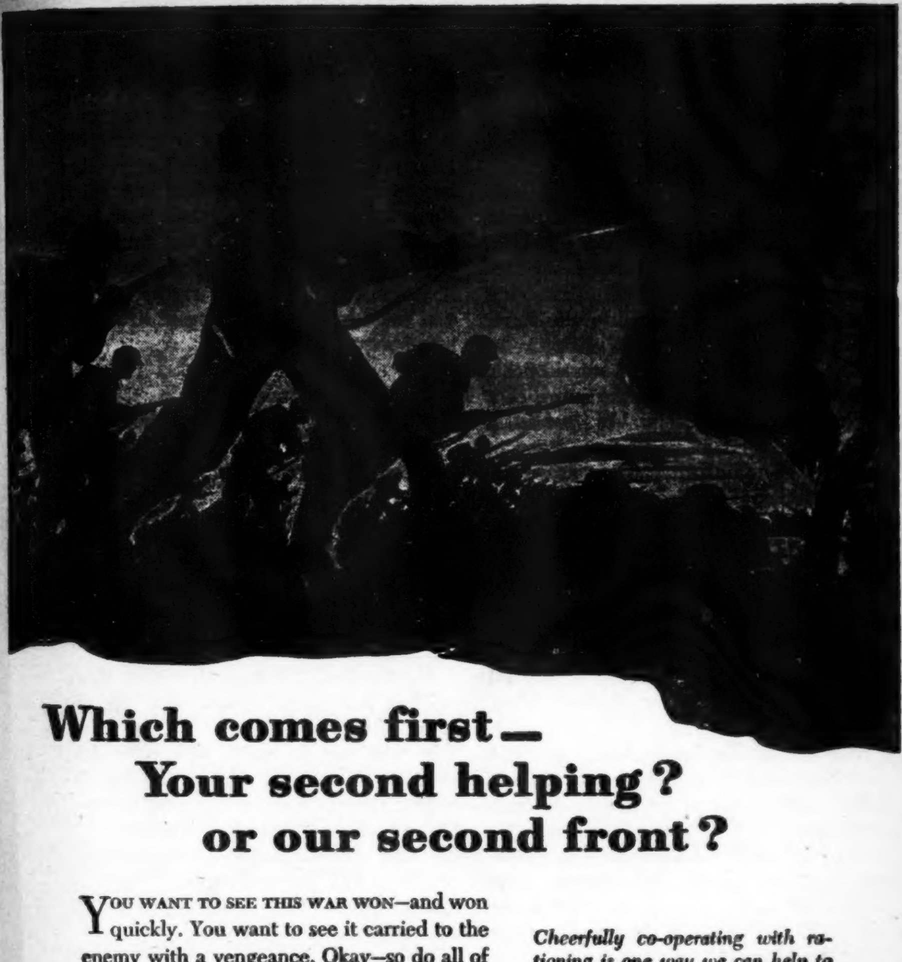
Outside the gallery door his escort rose to accompany him, but he shook his head. This was his journey—no one else's. As he walked the corridors unaccompanied, he felt that he was in an altogether different time-stream from that of the hurrying, taut-faced priests around him. A retrograde time-stream.

You're coming back, Knowles Satrick. You're completing the cycle. It's been a long journey, Knowles Satrick, but now you're coming home.

He entered his apartments. They were in semidarkness. He picked up the oblong of gray paper in front of the televisor. The other side was blank.

He looked up. Standing in the doorway of the inner rooms was a woman clad in the drab homespun of a Commoner. Despite the darkness he could see her plainly, as if she faintly glowed. It was the witch Sharlson Naurya. And—for now the conclusiveness of the resemblance could not be denied—it was also his sister Geryl.

For the moment his trancelike state vanished entirely, being replaced by an icy alertness. What, in the name of reason, had he been doing? He had



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EVERY CIVILIAN A FIGHTER

walked into the Witchcraft's trap.

His old nature reasserted itself. Almost he smiled. So this was how the Witchcraft hoped to frighten and coerce him? A trap, indeed, a psychological trap, but not quite good enough.

Violet energy lashed from his outstretched hand. For a frightful moment it did not seem to affect the figure at all. Then the homespun flared, the face blackened. A disfigured, dissolving thing, it collapsed back into the inner room, out of his range of vision. In his nostrils was the odor of burned flesh.

For a moment he felt the surge of a great personal triumph. It was as if he had defeated his own past, come to engulf him. He had reaccomplished his last murder, tardily but once and for all. His past was dead forever. The voice which still seemed to be calling him back no longer had any hold over him.

But, almost in the same moment, he realized that this seeming victory was an unreal thing. That it was his Neodelos—the last great flare-up of his old energy; and from there the way went all downhill.

For out of the inner door, unsinged by the flames that had destroyed her, softly walked Geryl in the same drab homespun.

And behind her followed a queer procession. A gaunt old woman who limped on a crutch. A very old priest whose jowls, once fat, had now grown loose and flabby. A dull-faced, surly Commoner a little older than himself. Another priest and several more Commoners, most of them very old.

You've completed the cycle, Knowles Satrick. You're through with it. It's all over. It might as well never have happened.

For that silent procession was made up of the people he had murdered. But they were not as he last remembered them, not as they were when they had died. Had they been, he might have suspected some guileful deception—and have had the strength to act on that suspicion.

Like Geryl, *they were as they would have been had they lived until today, aging in normal fashion.* These were no thin ghosts, but the solid phantoms of a materialist's hell—the hell of an alternate time-stream which had swirled out to engulf him. He had not killed them at all. Everything had been canceled out. Or he had killed them and they had continued to live—elsewhere.

Asmodeus had been right. There was more to it than mummery. And the more was horrible.

They circled him where he stood at the desk, eying him coldly, without hate.

He noted that the dark outlines of the room had changed. The shadow masses were different.

One last despairing flicker of skepticism—they might be telesolidographic projections of a diabolically artful sort. With an effort that he knew could not be repeated, he blindly groped outward, touched the nearest one—Geryl.

He touched substantial, living flesh.

Then hell closed round him, like the clang of a prison door.

It was not so much terror he felt, or guilt—though in a sense he was enduring the extremes of both emotions—but an all-encompassing realization of doomful predestination, a complete surrender of will power because he was up against forces which could nullify all the achievements of will power.

In front of him a little square of light leaped into being. It was a moment before he recognized Brother Jomald's face in the televisor panel, another moment before he remembered who Brother Jomald was. Even then it was as if he were looking at a picture which chanced to resemble someone he had known a long, long time ago, in another life.

"Your eminence We have been deeply concerned for your safety. No one knew your whereabouts. You will return at once to Web Center? There is an emergency."

"I will remain where I am," answered

Goniface, almost with a touch of impatience. What a futile, chattery creature was this ghost! "Ask your questions."

"Very well, your eminence. The situation at Neodelos has again grown grave. It was not the clear victory it seemed at first. After the first successes there its priesthood has had no more. Power Center there is again threatened. Meanwhile, Mesodelphi and Theneopolis are both invaded. In view of what has happened at Neodelos, shall we order similar counterattacks at both those Sanctuaries?"

With difficulty Goniface recalled some of the problems of that ghostly time-stream in which the Hierarchy was dying. They seemed as remote as the affairs of another cosmos.

He lifted his eyes to the circle of old faces around him. They spoke no word, but one and all shook their heads. He particularly noted the little toss, jerky now with age, of his mother's haggard features. He knew it so well.

They were right. The Hierarchy was fading from that other time-stream, even as he had faded. And it was best that it fade swiftly.

"Cancel all counterattacks," he said, the words forming themselves effortlessly. "Suspend all such operations—until tomorrow."

For that dying time-stream, tomorrow would never come.

There followed what seemed to Goniface a pointless and tedious argument with the ghost of Brother Jomald. Yet Goniface persisted, for he felt that the fading of the Hierarchy was a necessary and essential consequence of his own fading. It, too, had a cycle to complete. It, too, must return to its beginnings.

And, all the while, beneath Jomald's objections and oppositions, Goniface sensed—dimly, as if it were an emotion remembered from another incarnation—a frightened and tired willingness to terminate all struggles and tensions, a doomful thankfulness that the end was at last in sight.

Finally Jomald said, "I will obey your commands, but I cannot take sole responsibility. You must speak to the Apex Council and the Staff."

And now a little picture of Web Center filled the square of light. Those pygmy ghosts seemed to be looking at him.

"Cancel all counterattacks," he repeated. "Suspend all such operations—until tomorrow."

It was strange to think that that ghost world still had a dim existence, stranger still to think that the ghost name of Goniface should mean so much in it.

More words with Jomald then. With monotonous regularity, messages of Hierarchic defeat. Ever-deepening gloom. Tragedy of a time-stream dying.

Finally a note of frightened yet futile urgency.

"Cannot contact Cathedral Control Center here at Megatheopolis. Chief Observation Post reports that Cathedral war blast no longer flares. Chief Observation Post cut off. Shall order counterattack?"

For a last time Goniface raised his eyes. But he knew beforehand that the answer would be "No," and that he would give that answer to the frantic yet hopeless question. This time he particularly noted the senile, pendulum-like headshake of the old priest, his first confessor.

"Disturbance at Sanctuary Control Center. Light failing. Priests fleeing into Web Center report a blackness, with eyes, flowing down the corridors, engulfing them. No word from Power Center. Counterattack?"

But Goniface was thinking how like his own was the destiny of the whole Hierarchy and of every priest in it. Whether they murdered their families—and their own youth—actually or only in spirit, it amounted to the same thing. They betrayed and deserted them, left them for dead, as it were, to enjoy the power and pleasures of a sterile tyrant class.

"Doors burst open. Blackness. Shall order—"

Goniface made no answer. As the panel went black—but not because it had gone dead—as, to his seeming, the time-stream died, his feeling of resignation became complete.

He did not know that, in the under levels of his thinking, he was holding tight to one last defense against the forces which had engulfed him.

XX.

Daylight had come back to Megatheopolis, bathing the terraces of the Sanctuary with a white splendor. It was that moment of early morning when the warmth of the sunlight first begins to strike through the chilly brightness. There was a general feeling of emptiness and of dazed relief, as when, after a great hurricane, fisherfolk come out on the beach to talk in hushed voices of the might of the storm and of the damage it had wrought, to peer curiously at the wreckage washed ashore and incredulously at the high-water marks of last night's waves.

Such a feeling was apparent in the faces of the Commoners who wandered about the terraces in small groups—and not too many of those, for the victors in last night's struggle were determined to keep matters well in hand. Later on the Commoners would begin to talk in loud voices and poke at things and pry, but for the present they touched nothing, said little. Their eyes and their minds were too busy.

They kept meeting priests who were wandering about even more aimlessly than themselves. At such times they merely stepped aside to avoid each other without comment. Most of the priests wore ragged black armbands, perhaps torn from the robe of a dead deacon, to indicate that they had changed sides, although no one as yet had asked them to.

Occasionally the terraces were crossed by a man or woman who walked briskly and obviously knew what he or she was doing. Most of these wore a simple black tunic, which only faintly suggested a uniform, but a few were still clothed as Commoners or even as priests. On the shoulders of some, like trained monkeys, peering familiars perched.

Necks were craned as a faint hissing broke the silence. Looming over the intervening structures, the Great God's head was visible. A light scaffolding had been set up on the shoulders, and pygmy figures were setting to work in a businesslike way. There was the flicker of tiny blue flames.

Onto the topmost terrace four figures issued forth—one in the scarlet and gold of an archpriest; two in black tunics, guarding him; one—a woman—in drab homespun.

"Yes, it was very simple," Sharlson Naurya was saying, and the after-the-storm emptiness was apparent in her face, too, although her words were stony. "No alternate time-stream, no dead come alive, nothing like that. But it was what Asmodeus had devised for you long ago, and so it worked—though the emergency forced us to make some changes. It was your familiar who, by telepathy, influenced your thoughts. Likewise it was he who called your name from your apartments. With one exception, the figures that appeared to you were telesolidographic projections, reconstructed on the basis of old duplicate solidographs preserved in the Hierarchic Dossiers of Commoners, the effect of normal aging being achieved by painstaking retouching. Telesolidographic projections also accounted for the seeming change in your room.

"You would have known that they were solidographs, except that you touched me and found me real. I placed myself in such a way that it would be me you touched. My clothes were impregnated and my skin filmed with a faintly glowing preparation, so that I would resemble the others. You would notice it now, were it not for the sunlight.

"You found I was real—and yet you knew I could not be real, for you had just destroyed me with your wrath beam. There lay Asmodeus' clinching subtlety. When you first saw me in your apartments, you saw a telesolidographic projection. *That* was what you destroyed. A sequence showing its blackening and dissolving had been faked and was switched by the operator as soon as you activated your wrath beam. You may remember the time lag.

"Had the scheme failed, as by some error in timing, you would instantly have been killed an an alternate plan adopted. But it was better to let you live and make us of your power over the Hierarchy, to defeat it, than to kill you and by that action perhaps jar your overawed subordinates into taking over your responsibilities and the supreme command. Asmodeus died, but the Witchcraft triumphed, because there were those who could and did succeed him. With you it was just the other way."

Goniface did not reply. Once again his face was a mask—to hide his bitter, nauseous self-contempt. To think that his rock-bound materialism had yielded to a mere trick! That the Hierarchy had suffered world defeat because of *his* weakness, *his* credulity, *his* lurking superstition.

But he was not altogether without consolation. For he knew that the Hierarchy would still win out, although with no credit to himself. Like a maimed serpent he nursed the poison of his secret, knowing he had strength left to strike once more.

In his inmost mind he knew that this bitter gloating was a second-rate emotion, just as he knew that, despite the trickery which had elicited them, his thoughts last night about the destiny of the Hierarchy and himself had been *right*. The Hierarchy *had* passed its peak. Its leaders, himself included, *had*

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become second-rate. But that did not stop his gloating. Rather, it justified it.

Almost slyly, he turned his head and looked beyond the Sanctuary walls. On this side, away from the Commoners' Section, lay the Blasted Heath, an arid gray expanse of many acres, on which no vegetation grew. His gaze lingered there knowingly.

"All my life I have looked forward to this moment," he heard Sharlson Naurya say, and there was a weariness apparent in her voice. "As if all my life I had been falling from the bridge and looking up at your face and willing the miraculous moment to come when I would be able to reach up and pull you after me. Now the moment has come, and it means very little."

The oddly distorted shadow of a man entered her field of vision. She looked up. The Black Man raised his hand in greeting. Dickon was responsible for the distortion. From his shoulder-perch he imitated his brother's greeting. His fur was a gorgeous golden red in the sunlight.

"I have just come from Web Center," the Black Man explained. "We have established contact with our forces in most of the key cities. There only remains the mopping-up of a few small towns and rural Sanctuaries."

Without any animosity, but with frank curiosity, he looked at Goniface, who slowly turned back from his contemplation of the Blasted Heath. The glances of the two leaders met.

At that instant there came a distant roaring that grew momently louder, a curiously profound throbbing and drumming that seemed to shake the ground. Those wandering on the terrace gazed quickly toward the head of the Great God and the workmen who were still busy around the neck. But the new sound was too big for that.

Its thundering filled the sky. Something was coming from the sun, darkening it.

There was a triumphant yet reptilianly bright light in Goniface's eyes,

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as he held those of the Black Man. "You've won," he said, "but now you've lost! Late but not too late comes the aid we summoned from Heaven, bringing enough military machines to turn the tide and win back the scantily armored Earth!"

The thunder rose to a shattering climax. A great shadow darkened the Sanctuary. A vast ellipsoid construction appeared overhead from the direction of the sun and came to rest above the Blasted Heath, its mighty repulsor beams plowing like huge pillars into the gray soil, digging great pits. While it still rocked there aloft, circular ports began to open in its dully gleaming surface.

Goniface waited for the look of dismay to come over his adversary's face. But it never came.

As the thunder died the Black Man smiled in a friendly way and said casually, "Oh, I know all about the relief ship from Luciferopolis. I came out to see it land. What you say about it is largely true. I also know that Lucifer is the name of the Morning Star—Venus. Unfortunately for the Hierarchy, it's also one of the names of Satan. Of course, it's understandable that you wouldn't know about the recent turn of events there. Communications with Venus have been very bad, haven't they? And not altogether because she's moving toward opposition, I fancy. Still, I would have thought that you'd have guessed that the Witchcraft was operating on Venus, too—and that it would work a little faster in the colonies than on the mother planet. I imagine it's been all over on Mars, too, for some time, but since Mars is way on the other side of the Sun, it will be a couple of months before we find out for sure."

He turned and looked up. From the open ports of the spaceship, black squadrons were darting, to the great amazement and awe of the wanderers on the terrace, who looked as if they might start a panicky flight.

"They'll be all angels, I imagine," he commented. "Just refinished in black and fixed up a bit. Except the bigger ones. You called those archangels and seraphim, I believe?

"You see, it was really *our* relief ship," he went on reflectively. "I imagine that Asmodeus understood from the beginning that any revolt against the Hierarchy must be planetary. Besides, the Hierarchy was always a bit more shaky in the two colonies. The colonies are supposed to have been a bit more in the right, I'm told, in the interplanetary war that paved the way for the Hierarchy. It would have taken a big war like the Interplanetary one to have shattered the Golden Age, wouldn't it now? The Blasted Heath itself is one of the scars of that war, isn't it? Devilish weapons they used in those days. Ours would seem very puny to them by comparison."

He looked sideways at Goniface. With a certain malicious humor, he remarked, "Must have been rather comforting for you priests to know that you could always call for aid from Heaven, or escape there if need be—and an ironic pleasure in knowing that the myth of mankind storming Heaven was no more than literally true. Well, now we'll have a bit of Heaven on Earth for a change."

Goniface no longer sought to conceal his sick self-contempt.

"I hardly need remind you," he said coldly, "that it would be just as well—indeed, very wise—to order my immediate execution. Unless you desire to enjoy further crude jibes at my expense."

The Black Man laughed heartily. "I *do* enjoy them," he said. "I seem to be one of the few who can enjoy that sort of thing." This with a quick glance at Sharlson Naurya. Then he looked at Goniface and his voice grew somewhat more serious. "No, I'm afraid we can't execute you. We can't enjoy the luxury of that kind of revenge. We're too shorthanded to spare material. The Hierarchy had its hands full managing the Commoners, so our difficulties must be very obvious to you. We can't spare a mind like yours. It occurs to me that Brother Dhomas would as soon remake personalities in one direction as another—all he cares about is the changing. Of course, it might not work. Jarles was rather a costly success, wasn't he? Still, with suitable precautions, it's worth a try."

After the former World Hierarch had been led away, the Black Man and Sharlson Naurya watched the jittery excitement of the crowd as some of the black devil squadrons landed on the lower terraces and their Venusian-colonists pilots emerged. Once they turned toward the Cathedral and noted that the workmen had almost completed their circuit of the Great God's neck.

He confided to her in an undertone. "I'm a lot more eager than even I admitted to put the best Hierarchic minds to work on *our* side. There's no joke about our being shorthanded—especially considering what we want to do. And Asmodeus dead—oblivion be good to him! When I think of what's coming! Things will be quiet for a few days, but after that— First of all, the Commoners will want to kill off all the priests. There's a little of that sort of thing going on right now. We're their only protection. Next, the Commoners are still thoroughly steeped in supernaturalism. They take it as a matter of course that the Witchcraft will be set up as a religion. They fully expect to go to church and find an image of Sathanas over the altar. They're probably already disappointed that there aren't a lot more Satanic miracles going on. When they find that we consider the Witchcraft finished, some of them will want to revive it *against* us. Others, a little later, will decide to revive the cult of the Great God. On top of all that, Hierarchic counterrevolutions will be attempted! I fear that all of us will spend very busy old ages—if we live that long. When you think of the work that's going to be involved in educating the Commoners and remaking their social system and gradually shifting them over to Hierarchic—scientific—economy! For, of course, at the beginning then we'll have to maintain both economies—feudal and Hierarchic—which will inevitably suggest to some of our none-too-well-balanced co-workers that it would be very convenient to revive the Hierarchy under a new name, with black robes instead of scarlet. Oh, things will be lively, all right, never fear!"

As he broke off he noticed that a fat little priest with a black armband was peering at him and at Sharlson Naurya from a distance—timidly and nervously, as if debating whether to attempt to introduce himself and perhaps ask a favor. Apparently the looks he got in return frightened rather than encouraged him, for he turned and walked off rapidly.

"I know that priest," said Naurya. "He was the one who—"

"I know him even better," the Black Man interrupted. "Brother Chulian. Dear little Brother Chulian. Mild, soft, quite well-intentioned, but utterly selfish—and completely typical of the vast majority of them. When you think that we've got to integrate chaps like that back into their families, or at least back into the society of Commoners, remembering—as you know well—that Commoners are no paragons of loving kindness, but have been turned hard and cold and rather nasty by generations of useless, back-breaking toil— Oh, well, we've been over that before. But doesn't it suggest to you that I'll need someone to comfort me during the years of exasperation and thankless labor ahead?"

And he looked very frankly at Sharlson Naurya.

And she looked back at him as frankly. For a moment the grave, tired lines of her face softened into a smile.

Then she slowly shook her head and looked away. The Black Man followed the direction of her gaze.

He was standing at the far end of the uppermost terrace, his back to them, looking out into space. He still wore the scarlet robe of a Fourth Circle priest.

"Oh, I suppose you're right," the Black Man admitted rather unwillingly after a moment. "I suppose he deserves something, too, after the rough time he's had. And I don't suppose the provisional government will want to execute him for the murder of Asmodeus. Anyway, he has a rather good defense, if you can make him use it. Yes, I see your point, all right!" he finished rather sourly.

She nodded. "I've lived for a thing like revenge," she said softly. "I've gone through something of the kind of hell he's going through. When it was over, this morning, he tried to kill himself. I made him promise—"

As he turned to go, she added, "After all, you at least have a sense of humor to comfort you."

"Yes," he admitted. "But there are some situations in which a sense of humor is not very effective.

And with that he strode off in the opposite direction.

But before he had gone very far there came one more delay. A crooked figure in rags and a peaked hat, accompanied by a black cat, was hurriedly hobbling up the terraces, waving her cane at him to wait. To either side the Commoners made way for her, bowing low, and making awed reverences. They seemed rather relieved to see someone who was obviously and undeniably a witch. It satisfied their sense of what was right and proper in this situation.

"Silly ninnikins!" was the contemptuous term that Mother Jujy applied to them when she arrived, somewhat out of breath, on the topmost terrace. "Everywhere bobbing and scraping to me, as if I were an archpriest or some

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other monstrosity! A few days ago they wanted to burn Mother Jujy, but we don't hear any talk of that now!"

"Greetings, ancient and honorable one," said the Black Man with a certain pleasant formality. "Do you dislike the homage that is your due? Is there anything that you desire? You have only to ask."

"Maybe I've come for my pint of blood," she suggested darkly.

"Oh, Mother Jujy," replied the Black Man, cutting short the familiar's floridly piped gratitude, "that pint of blood is the most precious in the world. If we were going to put the Cathedrals to their former use, I would have that pint of blood enshrined as the most sacred relic of them all."

"Stuff and nonsense!" said Mother Jujy. "I'm a wicked old woman and I like vile sensations. That's the only reason I did it." She leered at Dickon. "No, I didn't come here to be buttered with praise. I want to know what's going to happen to me."

"I think you can be of very great help to us," said the Black Man thoughtfully and in complete seriousness. "We stand in need of your—er—no-nonsense point of view, and the Commoners will want, even more than before, just that sort of counsel that you alone can give them. A kind of general liaison officer, perhaps—"

Mother Jujy emphatically shook her head. "No. A witch I am and a witch I remain! And I want to tell you I don't like what's going on! Why, your people are going around telling Commoners that Sathanas doesn't exist!"

"That's right, Mother Jujy. The Hierarchy and the Witchcraft are both finished."

"I don't like it! You'll get into trouble if you start giving away your secrets. That always happens."

"I'm afraid you're right," he said.

With a hollow reverberation, as of departing thunder, the head of the Great God crashed in the Square.

THE END.

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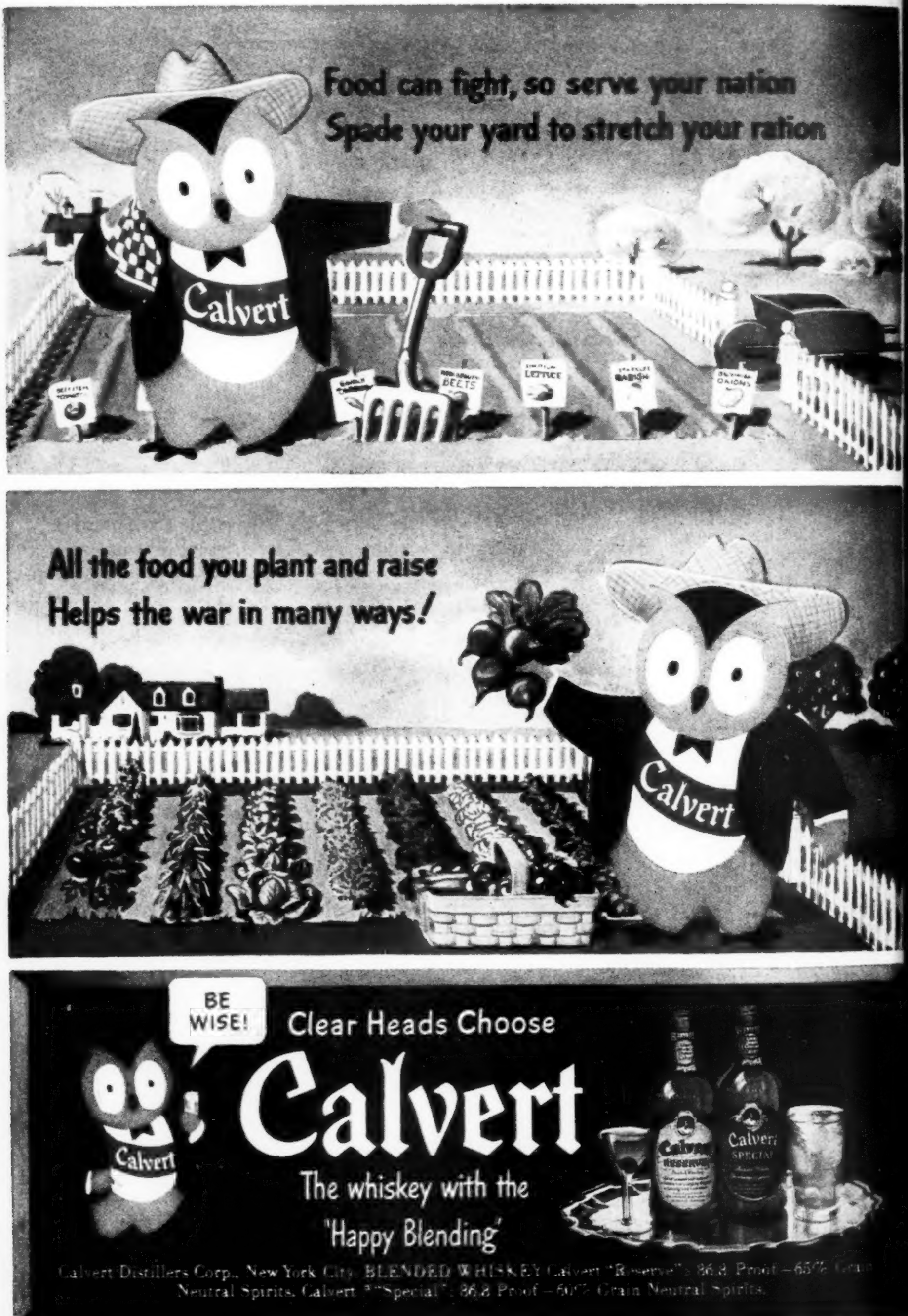
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